Community directed implementation of health projects:

Reporting with Pictures

A concept paper for researchers and health policy decision-makers

By Ane Haaland
with Oladele B. Akogun and Oladimeji Oladepo
Contributions and foreword by Prof. O.O. Kale

UNDP/World Bank/WHO
Special Programme for
Research and Training
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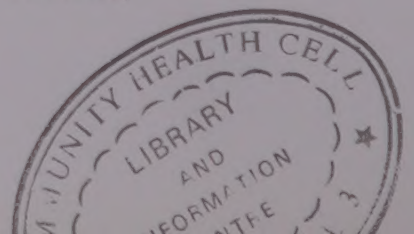

Reporting with Pictures

A concept paper for researchers and health policy decision-makers

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CONTENTS

List of abbreviations

APOC	African Programme for Onchocerciasis Control
CHW	Community Health Worker
COMDD	Community-directed Distribution
COMDT	Community-directed Treatment
COMDTI	Community-directed Treatment with ivermectin
DMT	District Management Team
FGD	Focus Group Discussion
HW	Health Worker
NGO	Non-Governmental Organization
OCP	Onchocerciasis Control Programme
PD	Programme-Directed (Distribution of Ivermectin)
PHC	Primary Health Care
PRA	Participatory Rural Appraisal
RRA	Rapid Rural Appraisal
TBA	Traditional Birth Attendant
TDR	UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases
UNICEF	United Nations Childrens Fund
WHO	World Health Organization

Acknowledgements

The work reported in this manual would not have been possible without a number of people being willing to think and act innovatively and flexibly.

Dr Hans Remme, director of the Onchocerciasis Operational Research Task Force (OOR) in WHO/TDR, initiated the work and has been a major support throughout the process. He initially contacted Prof. O.O. Kale at Ibadan University. Kale immediately saw the potential in the idea and agreed to organize a researcher (Oladimeji Oladepo) to undertake the field work to develop a pictorial form together with TDR's social scientist. Kale has been an inspiring partner to the researchers in numerous brainstorming sessions in the field, and provided important professional backup throughout.

The OOR has been very supportive, and given encouraging feedback and financial support to the project: In addition to Hans Remme and O.O. Kale, the Task Force members are: Uche Amazigo, Boakye Boatin, Stephanie Meredith, Mitchell Weiss and Christine Witte.

The researchers who tested out the original draft form contributed important insights on how the form could be used, and deserve special thanks: Oladele Akogun, Margareth Mafe, Henry Edeghere and Rich Umeh. Mafe continued to work with the research team to further develop the form, and Akogun has given major contributions to the manual from his work in Yola.

The Nigerian administrators in the Iwo Local Government Area (LGA) supported the idea, and released their staff to work with the researchers on several occasions. The national manager of the Onchocerciasis Control Programme was also fully supportive.

Last, but not least, the headmen and community members in Ipata-Araoba and Ogburo deserve our most special thanks for their willingness to give their time and sincere interest to the project. Without their wholehearted involvement, the reporting form would never have materialized.

Ane Haaland, on behalf of Oladele Akogun and Oladimeji Oladepo.

Overview of some main questions

WHAT IS A PICTORIAL FORM?

It is an illustrated reporting form developed with and for literate and illiterate community members.

HOW IS A PICTORIAL FORM USED?

It can be used to report on e.g. distribution of medicines in the community. There are several other potential areas for use.

WHY IS IT RELEVANT TO YOU:

As a health planner:

Community Directed Treatment (COMDT) has proved to be a viable, effective and cost-effective strategy. The pictorial form may make reporting more reliable.

As a researcher:

New strategy, which can facilitate sustainable community implemented projects. Research is still in its infancy, and much new ground needs to be broken. Operational research is in demand by governments and donors.

WHAT IS THE EVIDENCE THAT IT WORKS?

TDR's multi-country study shows clearly that COMDT works better than Programme Directed treatment, i.e. by the Government health system. There are strong indications that the pictorial form improves the reliability of reporting.

WHAT WORKS AGAINST IT?

Traditional attitudes dictate that distribution of medicines should be done by trained professionals, and reporting by people who can read and write well. Power relations should remain intact.

WHAT DO YOU NEED:

Health planner:

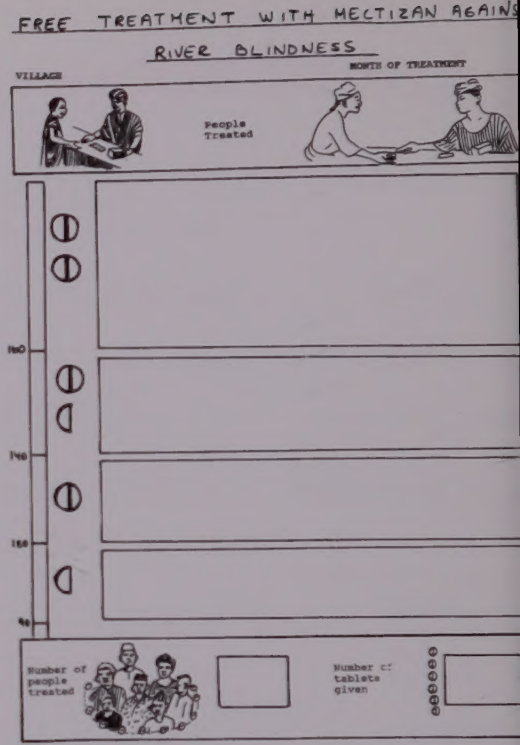
TO TRY IT OUT:

A vision, a belief that communities can do it, given some assistance, and a bold decision. A research team to develop the approach and the reporting tool. Finances.

Researcher:

TO DEVELOP A TOOL/FORM:

An urge to develop innovative research, qualitative methods skills, resource materials, finances.



WHO IN YOUR SYSTEM WOULD COOPERATE WITH AND SUPPORT YOU (RESEARCHER)?

Health planners and implementers with interest in effective Primary Health Care and community development, especially if they have been ordered to save money; people with experience in operational research, trainers using participatory methods.

WHERE DO YOU FIND LITERATURE ABOUT THIS?

International: WHO/TDR, APOC (addresses in literature list)
Local: Social science departments, community development projects, NGOs working with health projects, Ministry of Health, local UNICEF and WHO offices.

Foreword

Many new ideas, particularly in the domain of health care delivery, have a very short life span. Nowhere is the casualty rate higher than in Primary Health Care (PHC). The reasons for these are myriad. Among others, many an approach to health care at the community level are not subjected to sound scientific scrutiny before they are foisted on the health sector. Some have only limited applicability in terms of geography, culture and problem-solving potential. Many have proved to be unsustainable in the long term.

The concept of community directed implementation of health projects has its roots in one of the most basic of the tenets of PHC, namely community participation and ownership. Community-directed treatment of onchocerciasis with ivermectin (COMDTI) was a child of necessity. One of the major residual challenges in the successful implementation of COMDTI is the development of a means of recording and reporting of events as simple, and yet as accurate a form as possible, to be used by community members irrespective of their level of literacy.

Whereas the idea of using pictures as a means of communication is not new, its application in the context of this publication is singular and unique. "Reporting with Pictures" considerably enlarges the scope and vista of how record-keeping at the community level could be undertaken without illiteracy being a constraint.

"Reporting with Pictures" is not just another "cook book", it is rather a succinct yet comprehensive exposition of how policy makers and health planners, among others, can purposefully extend the frontiers of health care at the grass roots. It provides a substantial window of opportunity beyond drug delivery.

The COMDT concept emanated from an operational field research project. "Reporting with Pictures", which is a product of that project, has been written in such a way that it constitutes an adaptable model for other research endeavours in comparable situations.

Changes in programme implementation schedules are inevitable and can be readily accommodated. For example at the time of the onchocerciasis operational research project from which this Concept Paper emanated, the Mectizan tablets in use were 6mg formulations. This necessitated the breaking of tablets into two for persons whose height related dosages were fractions of 6mg i.e. 3mg (half a tablet) for those under 119 cm, and 9mg (one and one half tablets) for those between 141 and 159 cm, as illustrated in Picture 3 of Appendix 7. Since then the manufacturers (Merck & Co.) have effected a changeover to 3mg Mectizan tablet formulations which makes breaking tablets unnecessary.

Whether or not community-directed implementation of health projects becomes per se a durable PHC tool, there can be no gainsaying the fact that the concept of the use of pictures by the non-professional community health worker to record and report important events, could be justly regarded as a watershed.

Prof. O.O. Kale
Chairman,
Applied Field Research Committee, WHO/TDR
Chairman, Onchocerciasis Operational Research Task Force,
WHO/TDR

Background: The multi-country study

Onchocerciasis (River Blindness) remains a serious health problem for 18 million people in Africa. Control of the disease by the Onchocerciasis Control Programme in West Africa (OCP) was largely dominated by effective but unsustainable vector control operations, spraying larvicides by helicopter. In 1987, ivermectin became available as a drug to control onchocerciasis.

The African Programme for Onchocerciasis Control(APOC) was formed in 1995, to establish "self-sustainable community based ivermectin treatment throughout the remaining endemic areas in Africa".

Before APOC, community based ivermectin treatment was operational in several countries, with positive effects, but no systematic evaluation had been carried out. To establish scientifically what were the most effective and sustainable strategies for community-directed treatment became the task of WHO's Special Programme for Research and Training in Tropical Diseases (TDR). The TDR Task Force in Onchocerciasis Operational Research collaborated with OCP to organize and implement the multi-country study on community-based treatment with ivermectin, starting in 1994.

The study set out to investigate the effect of different strategies for community-based treatment. As sustainability was a main issue, the study focussed on approaches where the community was given major responsibility for its own treatment. Eight research teams were financed to carry out the study in five countries, starting in 1995. The analysis was completed in September 1996, and the main findings are available in the TDR/OCP/APOC report "Community Directed Treatment with ivermectin". Some of the findings are reported in the Introduction to this paper.

The pictorial form referred to in this paper was developed in 1994, was tested by the multi-country research teams in several countries, and then used by some of the teams in the actual study.

The purpose and layout of the manual

This manual describes the conceptualization, development, testing and adaptation of the pictorial reporting form to distribute ivermectin, summarizes the lessons learnt in the process, and relates these lessons and experiences to other research questions and topics. It also summarizes the principles of visual perception among illiterates which the form builds on, and which were confirmed by the testing in different countries.

The first part of the paper (Introduction and Chapter 1), which describes the rationale and the process of the development and testing of the pictorial form, is meant for health policy makers, health managers and researchers. Policy makers are also referred to Chapter 9, where possible research areas and topics are discussed and further elaborated, and to the overviews of the planning and implementation of the research, which are presented at the beginning of chapters 2, 3, 3.1, 3.2, 3.3 and 3.4.

The second and largest part - "How to do it" (Ch. 2-9)- is written for researchers wishing to use the method to develop and test their own pictorial reporting forms with communities.

Introduction: The challenge of COMDT

This concept paper demonstrates the development and testing of a community reporting tool: the pictorial form for Community Directed Treatment (COMDT) to control river blindness (onchocerciasis), in this paper called "the Oncho form". The form was developed in cooperation with mainly illiterate community members in a village in Iwo state, Nigeria. It is meant for use by literate and illiterate Community Distributors who are selected by their villages to distribute ivermectin. Ivermectin has to be taken regularly once or twice a year for 10-15 years to eliminate the disease.

Does the form work?

The pictorial form was tested in four communities in Nigeria by researchers and found to be an accurate reporting tool which was appreciated by the communities. It was then used in the multi-country study (see "Background") in only two (of eight) sites: Mali and Yola (Nigeria). The form at that time was mainly thought of as "for illiterates only", and researchers said communities almost exclusively chose literate distributors. The idea that illiterates can report on drug distribution is new - to researchers and communities alike.

Reporting turned out to be a major problem; Mali and Enugu (Nigeria) were the only sites showing little difference between reported and estimated coverage, with Mali showing the best results. (Yola was dropped from the analysis because of problems unrelated to the pictorial form). This indicates that the pictorial form could indeed be a valuable and reliable reporting tool for the communities, and needs to be tested out further, especially in its Simplified form (wich was essentially only page 1 of the revised form).

The high degree of reliability in the reporting enables the health authorities to use the forms to prepare their statistics as well as in their further planning of the project. Correct use requires adequate training and support of the distributors.

Will health planners buy the concept?

Many health planners have been (and still are) sceptical to community implemented health projects, especially if they involve drug distribution. A main reason has been the need for control, or for knowing exactly how the projects were implemented and the drugs distributed.

The low level of literacy skills in rural communities is often quoted as a reason for these communities not to take charge of their own information gathering - whether for project planning, implementation or evaluation.

The pictorial form was tested out in four communities in Nigeria, and found to be an accurate recording tool

The development of the pictorial form described in this paper demonstrates that communities are fully capable of reporting on drug distribution, given an appropriate tool which is worked out in cooperation with them. This view is also supported by numerous studies using tools such as PRA, RRA, etc, to involve and encourage community members to take charge of their own definition of problems and needs, to define the solution to the problems, and to organize the implementation of the solutions.

Secrecy and mystique about drug distribution

Drug distribution has always been associated with the formal health sector, where trained health personnel have been in charge of dispensing the right amount of drugs to people after proper diagnosis. The knowledge about the drugs has remained relatively secret, and this has contributed to keeping up the aura of mystique often associated with the use of drugs.

It is no wonder that many health professionals react with scepticism and often outright negativity to plans for changing such well established traditions. Allowing villagers with low literacy skills to be in charge of the distribution of prescription drugs must seem like negating the very basis of what the medical profession sees as one of its sacred rights. Furthermore, the fact that ivermectin is being given to people who are not complaining of any symptoms of the disease, have not taken any initiative to obtain treatment and are otherwise in good health, has contributed to the understandable scepticism shown by professionals.

Many medical researchers seem to share these attitudes and opinions, and research on community based medical solutions to health problems has so far not received much attention from mainstream researchers. This may change over the next few years, as governments as well as donors demand more operational research to find practical solutions to health problems.

Community-directed distribution of drugs is relatively untrod territory so far - there is limited experience that has demonstrated that the idea will work, and thus be able to convince the medical professionals to support it. The multi-country study is building up this experience, and the evidence is very positive:

The research on COMDT in Nigeria, Mali, Cameroon, Ghana and Uganda shows that COMDT is a very viable alternative to programme (or health system) implemented drug distribution of ivermectin: It works better, and it is cheaper.

COMDT is characterized by the following

- **Efficient**: Community distributors react more quickly to information about drugs being available from the local government, and they also distribute the drugs quicker than the programme designed (PD) system.
- **High coverage**: COMDT has consistently higher coverage than PD.
- **Reliable**: Dosage determination of ivermectin is close enough to correct to conclude that it is safe to use COMDT, provided the distributors are given adequate training and support.
- **Flexible**: In COMDT communities, the distribution system was often changed to suit the local situation. The freedom to determine what is most appropriate for the community contributed to higher coverage.

- **Trusted members as distributors**: Communities selected people they found trustworthy, respectable, competent and literate to be their distributors. All distributors were indigenes to the communities, and thus perceived the benefits of the programme in terms of success for the village.
- **Community distributors are better motivated**: Distributors selected by the community have a higher motivation to do a good job than their PD counterparts.
- **Pride**: Community leaders and members are enthusiastic about the system, which demonstrates that the health authorities trust them to distribute drugs.

Is COMDT sustainable?

A number of factors point towards sustainability of this approach:

The "Ownership factor": Research in a number of areas has shown that where the community has REAL influence on the planning process and implementation of projects, the chances for long-term sustainability are good. COMDT provides for this, with the outsiders being primarily facilitators of the initial process.

The "In-built self-evaluation factor": Communities can change the distribution system to fit their local situation.

The "Community Confidence factor": Communities build confidence by being able to manage the distribution, and see their family and neighbours improve their health. Presumably, they would also get positive feedback from the health system. The COMDT experience could lead to initiatives to take on other projects to improve community health.

Relatively independent of the administrative system in the country: as long as the system supports the establishment of a community distribution system.

The Pictorial Form can be used for other purposes

The use of a reliable reporting tool opens up exciting new possibilities for communities to take charge over projects that involve describing their situation or keeping records of distribution of a commodity, e.g. a drug. The purpose of the records will often be to allow the Government or NGO to see that the project has been run satisfactorily. However, the method can also be used e.g. in project planning, to gather information to make feasibility studies, etc.

Some potential areas where the method could be used are:

To develop pictorial forms for mass distribution of other drugs (other than ivermectin);

Forms can be used by illiterate or low literate Community Health Workers (CHWs) and/or Traditional Birth Attendants (TBAs) to record their activities;

Communities can describe and quantify their problems (e.g. on malaria cases, diarrhoea, schistosomiasis, etc.);

To carry out a census - etc etc etc.

Experiences with PRA, RRA and other participatory methods show that when community members choose their own visuals (be it drawings on paper or on the ground, stones, seeds, leaves, etc. to represent numbers and trends), they are perfectly able to use these in complex discussions about further analysis of and solutions to problems. Consequently, a pictorial form developed in cooperation with (or adapted by) community members is likely to be well understood, accepted and used. While PRA requires the presence of a trained facilitator throughout the activity, the use of a pictorial form would need only initial training, and then be in the control of the community alone.

1. Developing and testing the pictorial form in Nigeria

An overview of the Process

TDR: could illiterates record?

The idea of developing a pictorial form for use by illiterates to record information on community treatment was born in TDR's Task Force on onchocerciasis in 1994.
The Task Force was exploring ways to make communities be responsible for distribution of ivermectin to their members. The form could be developed for use in hard-to-reach villages where there is often no one who can read and write. Could community members in such places still be trusted to distribute the drugs according to the manufacturers' instructions, and record correctly what they did?

There was some scepticism in TDR to the practical outcome of such a challenge, but others with experience in working with communities and with illustrations for illiterates were positive it could be done. So - TDR decided to give it a try.

Multi-cultural team

Two experienced social scientists - one from the University of Ibadan, Nigeria and one TDR staff member - "attacked" the task together with one of the biomedical scientists involved in the TDR-assisted multi-country study on community-based treatment with ivermectin.

Brainstorm on concepts

The starting point was the written reporting form which had so far been used by the project-directed distribution system, where health workers had been in charge of distribution and recording of results, including side-effects.

The scientists brainstormed on how the form could be conceptualized and illustrated, and what we needed to know from the community to be able to make the first drawings.

Selection of high-prevalence community

We selected a community with high prevalence of river blindness, and met with the Local Government officials and the Primary Health Care workers responsible for the area. The PHC workers accompanied us to the village, where we met with the chief to explain our project. He called a village meeting, and introduced us. We had two artists with us, who were going to make drawings for the form.

Selection of illiterate community members

We explained our project, and asked for the community members to select six men and six women who could work with us to develop the pictorial form. Our wish was to work with illiterates only, and it turned out that the women were all illiterate, while among the men there were four literates and two illiterates. When we explained our wish to the chief, he arranged the selection of four more illiterates to be involved in

the work. We involved the literates in some of the work to prevent any ill feelings on the part of the literates who had been first chosen, and also to see to what extent they saw and did things differently than the illiterates.

How do illiterates count and measure?

We met with the two groups separately, explaining our task and why we wanted to work with them. We asked how people in the village would count and mark the numbers of something, how they would measure height and weight, and if they had any symbols for visualizing any such aspects. We discussed their suggestions. The women especially were shy and kept a safe distance from us (by sitting on chairs 4-5 metres away). As we got to know them better and they saw that we really wanted and appreciated their opinions, the distance vanished, and we were soon all sitting around the same tiny table discussing the drawings.

Draft drawings developed

We went back to town and developed drawings based on the village observations and information.
The artists developed several versions (pencil sketches) of each of the topic areas that needed illustration.
We did a quick review of pretesting methods for the scientists and field workers who were going to test the drawings.

First pretest of drawings

The pictures were tested with individuals and in a group, with the women and the men separately (we explained what the pictures were for, and how they related to what we had already worked on with them). We tested for comprehension, and for preference of style, posture, dress, etc.

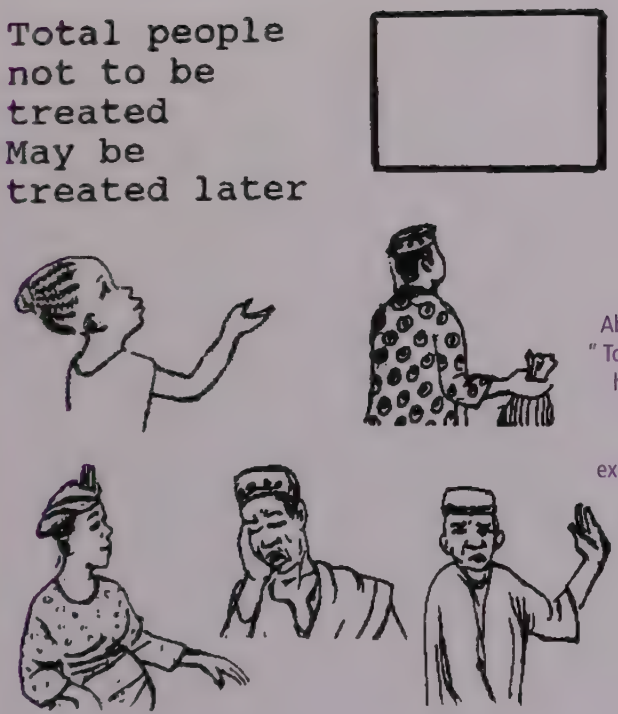
First pretest of form

The selected pictures were then revised, reduced in size, and arranged into a draft reporting form. Each concept was given a separate page (i.e. treatment, those not to be treated, those to be treated later, side-effects, and summary page). The form was again tested, and new adjustments were needed.

Second pretest of form - Using it in practice

The adjustments were done and the draft form was ready to be tested out in practice: the two groups were asked to use it to do a mock trial and tell us how it worked. Both the groups then "treated" the whole village, and gave us feedback on which pictures and columns were difficult to use, and how we should change them.

Community distributors were given the form to test out in a mock distribution in their village.
This brought up several problems in the form, and suggestions for how they could be solved.



Abstract ideas like this one: " Total number of people not having been treated"- are not well understood, and need to be carefully explained during training of distributors.

Those in the group who were not familiar with community work were amazed at the thoroughness of the work the two groups had done, and at the thoughtfulness and logic of their suggestions for improvement.

Third pretest - in another village

The form was then tested in another village in the same area, to see if a "virgin" village where we had not involved the villagers in the development of the form, would give different responses.

The form was again revised, based on the suggestions from the two villages (the "new" village had only minor suggestions - basically, the form worked very well).

The large pretest in four communities

A "final draft" was then produced for a larger trial in four different sites in Nigeria (all representing different ethnic groups). The researchers were the Principal Investigators of the multi-country study sites, and they were collectively sceptical about the idea of the form. After three days they came back and reported that the form works - i.e. illiterates can easily use it - and they had suggestions for further improvements, none of which were major.

The form is introduced to the Multi-country study

With these improvements, the form was now revised and sent to the other countries participating in the study (Uganda, Cameroon, Ghana, Mali), with advice on how to adapt it to their cultures, and a common protocol for how to test the form with the intended users.

The results from the testing in the different cultures show that most of the images are usually well recognized, and that some require adaptations and revisions.
The ideas (or abstract interpretations) are not well understood, as expected. These have to be explained during the training programme, and the images will then function as reminders of the ideas.

2. Planning the research

A. Steps to be taken: An Overview

a) Formulating the research question: Is the topic/information required suitable for developing a pictorial form? What are possible alternatives?

b) Selecting the research team: The skills, knowledge and attitudes among the members in your team will determine how good a job you can do.

c) Cooperation between planners, researchers and implementers: All actors to be involved should cooperate from the planning stage.

d) Deciding on contents of the form: What is the information needed - seen from the perspectives of e.g. drug manufacturers, health planners/administrators, and community members themselves?

e) Deciding on use of the form: Who will be using the form, and what kind of background are they likely to have? In which circumstances will they use it?

B. Background and discussion

a) Formulating the research questions

Before formulating the more specific research questions, the researchers must ask themselves whether the task or topic decided upon would be suitable for developing a pictorial form for information gathering, assessment, reporting or evaluation by community members.

Health planners and implementers need to be involved in the research from the planning stage.

A main criterium for potential success of the project is that the community feels the information or the topic is important, and that there are clear benefits for them if they participate. Without their strong motivation to cooperate and take charge of the project, it will not be sustainable.

The information to be collected must be simple and well defined. At the same time, flexibility is required from the researchers to adjust the type of information to be collected in cooperation with the community members during the formative phase of the research.

When developing the "Pictorial form" in Nigeria, the following broad research questions were asked:

- ***Is it possible to develop a pictorial form for reporting on ivermectin distribution in rural communities, which can be understood and correctly used by literate and illiterate community members?***
- ***If yes, what would the form look like, and what would be the steps in the process to develop it and test it out for comprehension and usability with the intended users?***
- ***Would the form, developed in one community, also be usable in other communities (and countries)?***

The researchers are guided through step-by-step answers to these questions throughout this concept paper.

b) Selecting the research team

The core Pictorial form research team consisted of two social scientists, one epidemiologist and two artists, with the occasional addition of two field workers to help moderate Focus Group Discussions and pretest the visuals. The Team consulted regularly with the Manager of the Onchocerciasis Control Programme, and with the District Management Team. Primary Health Care workers from the area accompanied the team to the communities.

In operational research, where the end-user of the pictorial form/tool is the health system, it would be advisable to involve the District Management Team (DMT) and PHC workers as partners from the initial stages of planning the research. As the research with the "Oncho form" was highly exploratory, and we did not know if the method would work, the consultation model with the DMT was acceptable.

For the research to be successful, a number of skills are needed:

For social scientists:
How to approach, involve and cooperate with the District Management Team and with the community. Qualitative research methods to assess e.g. community perceptions through FGDs, in-depth interviews, and observation; participatory methods/PRA to involve the community more fully in the process. Development of visuals with and for illiterates, testing of visuals for comprehension, preference, appreciation and practical use, analysis/interpretation of results of testing the visuals, and working with artists in the field. Knowledge about local perceptions of disease, and skills in interpersonal communication, are definite advantages.

For the trainers
(skills possibly covered by the social scientist):
Participatory training methods to train distributors how to give the drug to their community members and how to report on their activities. As many researchers have not been trained to use participatory methods, they need to cooperate with good trainers skilled in this field. The team may also need to call in a specialist in visual perception issues during the planning stage and/or consult with the Visual Perception literature (see Literature list).

For the epidemiologist:
He/she needs to be familiar with the disease, its cause, prevention and cure, the correct use of the drug, side-effects of the drug,what information has to be communicated to the people distributing the drug, and to those taking (or not taking) the drug, and what information is optional/can be left out.

For the artist(s):
The artist needs to be familiar with life in rural areas, and with how to portray people from these areas in a realistic and simple style. The most effective style for communicating with rural audiences has been found to be simple line drawings and these are also the easiest to reproduce on a form.
(See chapter 6 for more details on visual perception.)

The research team needs a number of different skills.

Putting together "the perfect team" is usually not possible: Some of the skills and knowledge the team does not have at the outset can be obtained through experience during the research process - as long as the team is aware and open about the shortcomings and discusses implications of these for the research findings.

c) Cooperation between planners, researchers and implementers

To maximize the possibilities for the research results to be used in implementation of the programmes or projects, it is important to involve the (health) planners (local and regional) and implementers (trainers, health educators) throughout the research process. The planners and implementers can give positive inputs at the initial planning stage, and when asked to do so they will feel a joint ownership of the project. Such involvement, combined with information and consultation throughout the research process, will make it more likely that the results will be used to improve the programmes or projects.

The method more commonly used (it is simpler and takes less time) is for the researchers to plan and implement their research and then present the results to the planners and implementers, with a request to put the findings into action. *The failure of this method to result in any action is as common as its use.*

d) Deciding on contents of the form

Information collected is eventually intended to be used by the national Ministries of Health and possibly a regional programme. For the "Oncho form" this was the African Programme for Onchocerciasis Control (APOC).
The first and immediate users will often be the district health (management) team in charge of the administration of the drug distribution programme. The needs of all these have to be taken into consideration when planning the form. However, the use of the form will only be successful if the form is found practical and logical to use by community members.

When planning the formative part of the research, make a preliminary list of the following:

- **the information needed, for what purpose** (from the perspectives of drug manufacturers, health planners/ administrators (MOH), trainers of community distributors, and community members);
- **the activities** to be performed by community members to collect the information;
- **the draft illustrations** to be used;
- **the possible method(s)** of recording.

For example, when developing the "Oncho form", we knew we needed information on drug dosage given to people of different heights, records of those who were refused treatment, and records of those who experienced severe side-effects (see original verbal form and the pictorial form in Appendix).

For deciding drug dosage, the **activity** to be shown in the illustration is height measurement, indicating different dosages for people of different height.

To find out about possible methods of recording numbers, we decided to have an open discussion with community members on how they record numbers in a context common to them, e.g. when they trade and measure goods.

How much info is really needed?

The contents of the information to be collected will often be determined by e.g. the Ministry of Health and/or the drug company, as in the case of the "Oncho form". As ministries and drug companies are usually collecting a lot of quantitative information for statistical purposes, they may not initially be sensitive to what information can and cannot be collected by the communities. *Sensitizing these groups to the reality of what info can be collected in the communities is an important task for the researchers. The best way to do this is for the health planner to observe directly in the community.*

In the development of the "Oncho form", the original contents were determined by the requirements of the drug company to record number of people who were treated with different dosages of the drug, number of people who were excluded for specific identified reasons, severe side-effects after taking the drug, and summaries of drugs used, drugs to be retained (for those to be treated later) and drugs to be returned to the health worker (see sample form).

Does it make sense to record something which "has not happened"?

During the process of development and testing of the form, it has become obvious that the information requested is perceived by the community distributors to be too much. The information on people treated with different dosages of ivermectin is filled in very well, while the information on those not to be treated (pregnant women, small children, sick people and persons travelling) is not well filled in. There could be several reasons for this:

- **Villagers do not really see the need for recording something that "has not happened"** - i.e. they have not given treatment to these people. This could be due to the issue itself (i.e. not having a practice of describing what has not happened), or to the trainers not having given enough emphasis on the need for filling in these categories, and the practice of how to fill in the form during the training.
- **The form is too complicated** for people not used to handling paper.

In the villages where the form was developed, the "pilot" distributors (two groups - one illiterate men and one of illiterate women) filled in the whole form, including the summaries, without any problems. However, these distributors had become familiar with the contents of the form during the process of developing it with the research group, and were therefore especially motivated. Thus, when developing such a form which will be used in a number of different communities, it is necessary to test out a draft form in "fresh" communities who have not been involved in the development of the form.

It is very important to restrict the amount of information to be collected to that which is essential to the implementation.

d) Deciding on use of the form

The intended users of the "Oncho form" were community distributors, selected by the community. They were assumed to be illiterate or having a low literacy level, living in the community and mostly being farmers. It was not assumed that they would have any previous experience in dealing with drug distribution or health matters.

These assumptions were to a large degree confirmed during the research, except that most communities tended to select distributors who were literate. This can be a problem, since some of the literate community members (especially the young ones often selected for this distribution) tend to be less stable, and often leave the community at some stage. Illiterate members tend to be more stable in the community, and can therefore ensure better sustainability of the programme. Thus, selecting and training literate as well as illiterate community members will often be the optimal solution. Having a recording tool which allows also the illiterate members to participate fully can facilitate this, and thus also encourage sustainability (the project can continue even if the young literates leave for town).

The researchers, in cooperation with PHC workers, were training the distributors. Their experiences and skills in participatory training methodologies varied, which will have influenced the distributors' abilities to distribute and record correctly.

(A manual/practical guide for the PHC Facilitation team on how to train the distributors in COMDT, and a training video to be used with the guide, have been developed, see literature list.)

The community's choice *of distribution system influenced strongly the way the form was used and what information was filled in: the form was designed with the assumption that distribution of the drugs was going to be done on a house-to-house basis, allowing the distributor to record everyone in the household on the form - those who were treated, and those who were not to be given the drug. However, most communities chose a central distribution point, and gave information about the exclusion*

criteria in the community meeting. Thus, pregnant women did not turn up, those too sick to walk stayed at home, those who were travelling did (of course) not turn up, and those who did not want to take the drug kept away. That left only the children of those to be excluded - those who were measured to be lower than 90 cm did not receive the drug, and their numbers were recorded in the form.

The next step in the "Oncho form" research will probably be a simplified form suited to the distribution system chosen by the majority of the communities, with only the most essential information to be recorded: The number of people treated with different dosages, and the severe side-effects reported. The information about exclusion criteria will be printed on a separate sheet, to be used as a health education tool during the community meeting, and later. (See Appendix)

C. Important insights from the Nigeria example

Ask indirect questions:

During the formative research in Nigeria, we asked how community members marked numbers while trading goods (rather than asking them how they would mark numbers on something abstract which they had not done before - e.g. distributing medicine). They showed us how they use simple strokes, and after each ten strokes there is a sign to separate them from the next ten. This method was then used in the form, and it functioned well.

Communities decided on central distribution of the drugs, rather than house-to-house (Drawing by Yola artist)

3. Implementing the research

3.1. Developing the concepts for the draft form

A. Steps to be taken: An Overview

a) Selecting the communities: Criteria need to be set, in cooperation with the planners/local health team, for selecting the communities.

b) Developing the draft work plan: The team develops a draft list of what to do in the community, how to explain their task to community leaders and members, and invite their cooperation.

c) Contacting the communities: The communities need to be contacted through the right channels, together with the local health team representatives, and their participation requested. Time for community meeting could be determined.

d) Selection of community representatives: Researchers and local health team meet with the community to explain the research, and invite the community to select representatives to work with the team on developing the form.

e) Working with selected community members: Research team explores with the community members the issues relevant to the form. The artists work with the researchers and make preliminary sketches.

f) Supervising the artist: Artists will not be used to working in communities, and the research team needs to supervise him/her closely to maximize his/her role and prevent problems.

Establishing good contact with the village headman is crucial to successful work in the community

B. Background and discussion

a) Selecting the communities

The research team, in cooperation with the health planners, need to set criteria for selection of communities where the form would be developed. Important criteria would be e.g. relatively high prevalence of the disease (in case of drug treatment), that the community members feel the disease is an important health hazard, and that there are clear benefits for them if they participate. Other criteria could be e.g. -

- Similarity to the communities where the form is (later) intended to be used;
- Relative homogeneity (ethnically, religiously): this makes it less (but not un-) likely that there are power games in the community which will negatively influence the research.

b) Developing the draft work plan

The team needs to make a decision about the (draft) process to be used to request the community to participate in the project, and about what would be expected of the community - i.e. a work plan. (See Appendix for The Process of Testing the "Oncho form".) The process for the "Oncho form" was continuously revised as the task became clearer.
This was an important part of the formative research process.

c) Contacting the communities

Contacting the communities usually needs to be done through or with the local authorities responsible for the area.
In Nigeria, two PHC workers accompanied the research team to the field. If the researchers go alone, the risk of alienating the local health authorities is high. Also, the communities may not respond well to strangers with such a "weird" task.

Sometimes, local authorities do not have the best relationship with the communities, for a number of reasons. The research team needs to be sensitive to this, and cooperate - while maintaining their distance - and build up their own relationship with the community.

During the first visit, the team should meet with the village chief to explain the project, and request cooperation to develop their pictorial form. Time for a community meeting can be planned.

d) Meeting with the community

During the second visit, a community meeting can be held to explain the project, and request the community to select representatives to work with the researchers. Suggested criteria for selection should be explained, and comments requested.

The community members to be selected to help develop the form should be those intended to use the pictorial form in practice. For example, to organize community distribution of drugs, or any other commodity, the community needs to select people they trust to be responsible for such distribution.
In the multi-country study sites, researchers found that the criteria communities used to select their distributors were usually honesty, respectability, and that people should be hard-working.

e) Working with selected community members

The issues to be dealt with in the form should be listed, and a rough question guide (but NOT a questionnaire!) should be developed. The question guide can be used in a group discussion, or to explore ideas in individual interviews. From experience, it is usually more productive to conduct such discussions in a group, as group members tend to inspire each

other and follow on each others' ideas, and the discussion becomes rich and creative.

It is advisable to conduct the exploratory discussions with the men and women from the community separately. For some topic areas, the women might have a different perception than the men, and they would not necessarily voice their own opinions in a mixed group.

Ideas to be explored would include an assessment of how the community perceives the problems to be dealt with, how they deal with them now, what kind of alternative solution(s) or strategies would be feasible, and how some of these could be represented with drawings and/or symbols.

f) Supervising the artist

The artist should be a listener and observer to the discussions with the community members, and make rough pencil sketches based on their explanations (but be seated outside the group, to prevent distractions). The purpose of his/her participation should be explained to the community members, and permission for him/her to join and make sketches should be requested before the discussion.

The rough sketches can be shown to the group members at the end of the discussion, to ask for their comments about whether the illustrations represent the ideas they have expressed. The artist can then make adjustments on the spot. Such a process is also very important for building up a good working relationship with the community members: they see that you take their suggestions seriously, and that what they tell you will guide the development of the illustrations and the form.

NB: Most artists will not have participated in a process of this kind before. It is important that you discuss with the artist the need for him/her NOT TO BE DEFENSIVE about his/her drawings: Community members will quickly stop making comments and suggestions if they feel the artist takes them personally and negatively. It is common that artists do act defensively when their work is commented on, however, it is crucial that they understand - and accept - that the development of these pictures is a process where the villagers are the ones who "know what is right", and the artist is simply the technician who visualizes their ideas on paper in a - for them - acceptable way.

For most artists, this will be their first experience of developing a pictorial form, and they will need guidance.

C. Important insights from the Nigeria example

DO NOT make the drawings "too local":
The artist in Nigeria added face marks on his drawings, which resulted in the drawings being rejected in other areas close by, where such face marks were not used. Thus, the artist should be instructed to not make the drawings too "local", i.e. include e.g. face marks or a very typical dress that is only used in a small area. If your form is going to be useful in other areas, the figures in the pictures need to be recognized as someone the distributors from all the areas can (at least to some degree) identify with.

There is a subtle difference between making a drawing general or "non-cultural" enough for it to be useful across many (national) cultural settings and have the users still identify with it, and making it so general that the users feel "this person could be from anywhere, and has got nothing to do with me." Researchers and artists need to be very aware of this point, and try it out consistently. In some cases, it may be necessary to make one version for each major cultural area.

Artists should be instructed to make the drawings acceptable and recognizable to local people, and at the same time not make them "too local". Drawing by Yola artist.

3.2 Developing and testing the draft form: An Overview

A. Steps to be taken

a) Conceptualizing the findings: The research team summarizes their findings from the community, and translates them into concepts for the form.

b) Developing draft pictures for pretesting: Drawings are developed for pretesting, based on the concepts.

c) Pretesting the draft pictures: Pictures are tested for comprehension, preference and cultural and social acceptability. Revision and second pretest may be necessary.

d) Developing the draft form: The selected pictures are put together with the concepts, and a draft layout of the form is made.

e) Pretesting the draft form: The draft form is tested for comprehension of concepts and of pictures, in an open discussion with the selected members. Revision/second pretest?

f) Testing the use of the form: The selected community members are asked to use the form as intended in the community, give feedback about problems, and suggestions for changes.

g) Testing the form in a new community: The same test as for f) is carried out in a new community.

h) Testing the form with the intended health system users: To identify operational problems, the form needs testing with local health administrators (and PHC workers/trainers) in another location.

i) Finalization of the draft form: The form is revised, based on the feedback from e, f, g and h. The version of the form to be used in the project can be finalized.

Researchers discussed ideas with the community members, while the artist made sketches based on their suggestions.

B. Background and discussion

a) Conceptualizing the findings

The research team can now conceptualize their ideas and findings, and develop a preliminary outline of the form, with draft text and illustrations. The guiding principle should be simplicity, and using the logic of the community - i.e. their way of looking at the problem, and the task to be done, in a sequence which follows the steps or action to be taken.

b) Developing draft pictures to be tested

The research team decides which drawings to develop further (from the rough sketches of community ideas made by the artists), and which new ones need to be drawn, based on the outline developed in a), above.

Several versions: The first drawings should be developed in a size that is easy to handle and to test out, e.g. A4. It is often a good idea to make several different versions of some of the topics, and let the community members chose the one they prefer. Showing them more than one version of a topic also conveys the idea that you REALLY do not know what the "correct" version should look like, and you are asking for their advice.

For example, the "Oncho form" team tested out four versions of "a pregnant woman", and the community members (especially the women) were very clear in their preference: The drawing we (the research team) thought was the clearest, and best showed the idea of "a pregnant women", was for them unacceptable - "the woman is so pregnant she can deliver any time, and it is painful to look at her!"

The picture they chose was a woman who was "modestly pregnant", enough for it to show clearly if you looked carefully.

Rough pencil sketches: The pictures should be developed as rough sketches (strong pencil), which underlines that they are actually rough drafts that should be commented on. The more "finished" the drawings look, the less likely it will be for the community members that you are REALLY asking them to criticize/help improve the drawings. Use photocopies for the field work.

c) Pretesting the draft pictures

The draft pictures should be pretested in the community, to check for comprehension, preference (if several versions), and social/cultural appropriateness. See Chapter 3.4 for details on how to carry out this test.

d) Developing the draft form

When the best versions of the individual pictures have been found, the draft form can be further developed. This is a critical stage. **Simplicity and logic** are the main guidelines, but it needs to be remembered that the logic of the researchers may be different from that of the villagers. One rule of thumb would be to put pictures together that fit conceptually together, or that **require the same action from the users.**

For example, on the "Oncho form", the first page concentrated on treatment: All the "action" centred around measuring people's height, deciding what dosage of treatment they should receive, and then marking in the form what treatment was given. This action was found to be easy for the large majority of community distributors to follow.

On the second page of the original draft the concept was "People not to be treated", the third, "People to be treated later", the fourth, "Side-effects/reactions to the drug", and the last page showed the summary of tablets received, tablets to be retained in the village for later treatment, and tablets to be returned. This division of concepts was found to work well with the villagers we tested with at the initial stage, and they found the form relatively easy to use.

e) Pretesting the draft form

The form is to be tested for comprehension of concepts and pictures. As pictures will most often be reproduced on the form in a much reduced size (from A4), it is important to assess carefully how small the pictures can be and still be easily understood. Here it is essential to also test the form in a "new" community, as people in the original community will already be familiar with the pictures (from the pretest), and will most likely recognize at least some of them.

If the results show that big revisions have to be made on the form, a second pretest would be necessary.

See chapter 3.4 for detailed guidelines on how to pretest the form: this is one of the most important steps in the research process.

A note on cooperation with local health administrators/ health workers: this is an excellent stage for involving them very constructively (if they are not an integrated part of the whole process). The researcher can conduct the interview, and the health worker can function as a recorder - which will give him/her a very good understanding of what the problems are and will maintain the control of the research method with the professional researcher.

The women tested out the reporting form in their community.

f) Testing the use of the form

After revision of the form, it has to be tested out in "the real situation" - i.e. community members have to be asked to use it in a simulated situation, and record the information collected.

For example, the "Oncho form" was given to the two groups we worked with (one with men, one with women). They had made their own measuring tool during the pretest (a stick, where marks were made for the important measurements, and symbols added to remind them of the number of tablets to be given for people of different heights). They had also practiced how to use the stick, and how to give the tablets, as part of the development of the pictures and concepts. During the pretest of the form (comprehension), we also went through the process of how to use it. In other words - the training on how to use the form had taken place informally as a part of the process of developing it. This is a practical option for the

community where the form is developed. The informal approach will also enable the researchers (and trainers) to identify where some of the difficulties may lie, and find ways to deal with them together with the community.

The testing of the "Oncho form" was done (in both communities) by the "pilot distributors" going to all the houses in the community, measuring all the household members, and deciding how many tablets each person should be given. They noted each person treated, on the draft form.
They also noted those people they decided not to treat.

The research team met with the groups after the testing (we came back to the community after two days), and discussed difficulties, and suggestions for changes.

We found that the illiterate women had done an especially thorough and conscientious job, and had some very practical suggestions for improvement. Some of the researchers in the team who had not previously worked with communities, and especially not with illiterates, were absolutely amazed at these results.
See chapter 3.4 for a description of the methods to be used for this testing.

g) Testing the form in a new community

To control for the "familiarity/positive motivation factor" in the community where the form was developed, it needs to be tested in a new community as well. This is also where a more formal pilot training programme on how to use the form, should be tried out.

Please refer to the WHO/APOC "Practical Guide for Trainers of community-based distributors" (Ref.list no.2) for suggestions for how to plan and conduct such training.

h) Testing the form with the intended health system users

If the form is to be used in the local health system, the form should be given to local health administrators (and health workers/trainers) in another location (not involved in the testing), with a request to use it as they understand it, including taking it to the community and training distributors (or others) to use it. The purpose of this test would be to identify operational problems, and explore how they could be solved.

The research team should simply observe what happens, without interfering (or taking initiative to explain anything), and make notes. Questions asked by the administrator HWs/trainers should be answered, and researchers should discuss with them how to best address such questions for their colleagues (e.g. do the problems need to be addressed through a seminar/training session on how to use the form, or would written instructions be sufficient). Researchers should also make their own observations of constraints, and discuss them with the administrators.

The role in this phase of the administrators involved in the research from the beginning, should be discussed.
It would be very useful to have them involved in the testing, as the decisions on how to deal with operational problems would be their responsibility. The research team should be careful about the size of the team involved in this phase: when accompanying the local group to the communities, two (or maximum three) members of the team should be present: the administrator, the person with training experience, and - if the trainer and the social scientist is not the same person - the social scientist should also join. The team should be

aware of their potential disruptive effect on the training, and try to be as "low key" as possible. For people used to being in charge, this is often not an easy role to adopt.

i) Finalization of the draft form

Based on feedback from the process described above, the final (draft) form can be developed. Depending on how many changes had to be made in f), g) and h) above, further tests in another community may need to be done before the team feels the form can be used well.

The main rule in pretesting is: Continue until you have solved all major problems, and at least 70% of the users understand easily the drawings (and the concepts, when explained). Problems in the visuals which cannot be solved should be dealt with carefully in the explanation to the training and in the training programme.

C. Important insights from the Nigeria example

a) Technical considerations created difficulties: When revising the "Oncho form" based on the comments to the individual pictures, it was decided to join page 2 and 3 on a double page, and put pages 4 and 5 together. The form would then fit on an A3 sheet which could be photocopied on both sides. This was practical from a (European) technical point of view, but it made the form more difficult to use: especially the double page of "people not to be treated, and to be treated later" was difficult for illiterates - and many literates - to deal with. There were too many pictures, the concepts were mixed up, and the form had to be turned sideways. Furthermore, none of the research teams who adopted the form could use the same format - A3 sheets and photocopying machines that will deal with them, are mostly not available in the African countries where the research was being done.

If technical considerations are given preference over those related to the clarity of the contents and the concepts, the comprehension and the practical use of the form may suffer.

b) The form is too complex: The testing of the pictorial form demonstrated that the form is too complex, and there is a need to seriously cut down on the number of issues for recording. This becomes a negotiation issue with the drug manufacturers and the health planners: if the planners have been involved in the research throughout, they will see the point, and be willing to cut down on their requirements for information.

c) Conclusions from test communities are preliminary: When the 5-page forms were tested out in the communities where it had been developed (and in neighbouring communities), it worked well. However, in other communities (closer to "the real situation" where the form should be used), it was found to be too complicated. Thus, it is essential to test out the form in "new" communities, to remove the "positive motivation bias" which will be present in communities involved in the development of the form.

To show the idea of "no" proved to be a difficult task: Is the distributor greeting the pregnant woman, or is she saying "no"?

3.3 Testing the form: Deciding the strategy

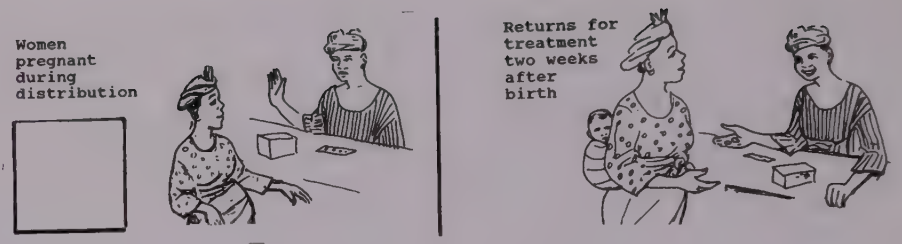
a) What can you test for, and when?
The three levels of testing pictures:
I: Literal Interpretation,
II: Meaning, and
III: Operational use, and when in the process to use them.

b) How do you decide what to test for?
Test for level I before training, level II after training, and level III after distributors have given out the medicine.

c) How many people should you test the form with?
Test till you have identified the problem, and the next version of the picture.

d) Testing with individuals or with groups?
With individuals to identify the problems, with groups to define the solutions.

e) The approach to testing in the community:
Work through and with the community leader.



The literal interpretation of these pictures is different from "the message":
Literal (Above): Pregnant woman asking distributor for tablet, distributor says "no".
Message: Pregnant women should not be given ivermectin.

Literal: Woman with small baby on her back is given tablets by the distributor.
Message: The pregnant woman has now delivered and is returning for treatment.

A. What can you test for, and when?

There are three main levels you can test the pictures and the form on:

LEVEL I

covers the **Literal Interpretation** *of a picture, and includes three main aspects:*

- **Recognition** of the object or activity;
- **Familiarity** with the object or activity, i.e. if the viewer can identify with the situation or recognize that the object or situation is relevant to his/her area, and therefore to the person;
- **Acceptability:** Whether there is something in the picture which is offending to people, or something which helps people accept the picture.

LEVEL I can be tested after explaining the study, the disease and how to distribute the drug to the selected distributors.

LEVEL II

covers the **Interpretation of meaning***:*

- **"The message":** Whether viewers can identify the meaning or message intended by the artist or planner, and whether the meaning is logical and acceptable to them.

LEVEL II can be tested before and after explaining the pictures and the symbols on the form to the distributors.

LEVEL III

covers testing of the **Operational use** *of the form:*

- **Useability:** How do the intended users utilize the form in the "real" situation, after having been trained?

LEVEL III can be tested after the distributors have been trained to use the form, and have actually used it in their own community.

Each of these levels can be investigated, using different methods, which are described below.

B. How do you decide what to test for?

Research in several countries has shown that illiterates and people with limited experience with learning from pictures, will usually interpret a picture literally, i.e. they will **describe what they see** (Level I). **A picture is seen as a representation of an object.** For example, picture 15 in the "Oncho form" would be seen as "a man being offered tablets by another man, and a bus and some huts in the background".

Most people will NOT interpret a "hidden meaning" or "message" intended (Level II). For example, the "meaning" of picture 15 in the "Oncho form" is supposed to be - " the man who has been travelling, will be given Ivermectin when he returns to the village". This is a message or interpretation which has to be explained or taught, and then people will remember what it means. (See Appendix for a list of the literal and abstract interpretations of the pictures in the "Oncho form".)

Thus, researchers developing such pictorial forms for use in communities with low literacy level should concentrate on establishing ***the literal interpretation*** *(LEVEL I) of the pictures through pretesting, and plan to teach the "messages" (LEVEL II) in a training session.*

The aim of testing the pictures at Level I should be to find images which are recognized easily by a majority of the respondents. For Level II you can ask about the message, however, the more practical aim is to assess whether the message makes **immediate sense** to people when it is explained. Once people have been taught what the message is, and it makes sense to them, the picture will be a reminder of the message, and will function the way it was intended.

When testing the operational use of the form with **the users** (Level III), you test whether the form will (likely) be used as intended by the community members, when trained by a) the research team trainer, and/or b) the trainers in the local health system. You will need to observe for problems which are due to the construction of the form itself, and those that are due to the inadequate training or orientation, or motivation, of the users.

THE CHALLENGE: Most researchers will stop when having tested the form under "ideal" circumstances, i.e. with their own (highly-skilled, well-paid) trainer having conducted the training. If your research aim has been to develop a form **which could possibly work**, you are OK. However, if your aim is to develop a form which **will actually work**, then you need to try it out within the "real" system. **Doing this well is probably one of the most important aims in operational research in the next decade. Donors as well as Government ministries are tired of researchers who do not competently address - and answer - how innovative approaches can be made to work in the "real" system.**

C. How many people should you test the form with?

When developing and testing the visuals for the form, the rule in pretesting is that you should continue testing until you are convinced you know the TREND of the answers. For example, if ten people say the sick man looks sick, and one says she is not quite sure, you can stop the testing of this picture, and decide it is good enough.

If five people say he is probably sick, and five say he is "just a man", you should go back to the drawing board and make him look sicker.

In other words, you should continue testing until you feel sure you have defined the problem, and until you have an idea about what the next version of the picture is going to look like.

Usually, testing with 10-20 people is enough to get a sense of what the problem is for the individual picture. Sometimes, if you get many very different responses, you may have to test with up to 30 people.

If the pictures are to be used for several different communities, you should select at least 2-3 different sites for the testing. The rules above apply **within** communities, and **between** communities, i.e. test with enough people in one community until you have decided what the problem is (at least ten people), then move to the next and do the same. If the results in the second community are very different from those in the first, you need to test in more communities, until you see **the trend**, have **defined the problem**, and have **decided what the next version** will look like.

When testing the form itself, a similar logic should be followed. Testing will often be limited to a group of selected distributors per community. The form may need testing in 3-4 different communities.

If quantitative justification of testing procedures are asked for, the rules usually given are:

- **Test with at least 20 people**
- **70% "correct" recognition is acceptable.**

It is usually a good idea to start testing in the community where you have done the exploratory research. Your respondents there will feel more "free" to point out problems with the pictures or the form, than in communities where the idea of "criticizing" pictures will be completely new. You can get useful insights, and indications for where to probe.

If you have to do the testing in the project area itself, where you will later carry out the research, you should be careful about how much information you give to the communities (i.e. biasing later work).

D. Testing with individuals, or with groups?

The main rule is:

- Testing with individuals **defines the problem** with a picture, or a pictorial form;
- Testing with groups **identifies solutions** to problems in a picture, or pictorial form.

Both methods can be used when developing a pictorial form.

Some questions may help the research team to decide which method to use in the different phases:

- **How will the form be used?** Will the distributor (or someone else) use the form by him/herself, or as a part of a group activity?
- **At what stage(s) in the development process (of the pictures/form) is identification of problems essential?**
- **At what stage could the creativity of a group (e.g. of distributors) be used to come up with practical, locally appropriate solutions?**

When there are both male and female distributors, it is usually more constructive to test the forms with the gender groups separately.

E. The approach to testing in the community

It is usually not necessary to inform the people prior to the visit. You should meet the community leader when you arrive, and inform him about the purpose of your work, stressing that you are **testing the pictures** and asking for people's advice to improve them (not testing the abilities of the community members). Explain that the form you are going to develop will be used by his community members as well as other similar people, and that you need to discuss with them what would be the best pictures to use. Show him some of the pictures and invite his comments, to make him familiar with your task, and with what you will be asking from people in the community.

Often the community leader will insist on coming with you on the testing. There are two constructive methods to tackle the problem:

- **You can offer to test the pictures on him first**, to allow him to become familiar with what you are doing. Or -
- **You can let him join you on the first few interviews.** You could then ask for permission to continue alone, explaining that experience has shown that when there are other people present in the interviews, it will influence the results.

If the leader is present, you have to judge whether or not to throw away the responses from the first interviews - very often people will be nervous when the chief is present, and this affects their answers. However, it can also have a positive effect. The leader being there lends importance to the task, and people may take it very seriously. How this works will depend on the personality of the leader, and how well you handle him - remembering that you are a guest in his community.

Good cooperation with the community leader is essential for successful work in the community.

3.4 How to test the form: A guide on methods

A. General methods: Conducting the interview

a) Interpersonal communication skills define the outcome

Testing of pictures is first and foremost an interpersonal communication exercise. The success of your test ("success" here defined as "obtaining an honest and constructive response from the respondent") is primarily determined by your ability to:

- Explain well the purpose of what you are doing in a manner which makes him/her feel the task is important to him/her, i.e. **motivating the respondent to participate;**
- Explain that you are testing the pictures, not the intelligence of the respondent, i.e. **taking away the fear of not being able to give the "correct" answer;**
- Explain to the respondent that she/he is the expert on this topic, and that you have come to seek her/his advice, i.e. **convincing her/him that her/his opinion is important and valuable to you.**
- Listen actively to what the respondent is saying, invite questions, and establish a good two-way communication.

If you manage to do this well, the quality of your information will be good, and the rest of the task relatively easy.

If it seems like we are harping on this point, you are right, and there is a very good reason for it. Long experience with testing of visuals has shown that this is the point where most people who are new to the method fail. And that if you fail here, the quality of your information will be poor at best, useless at worst.

Good interpersonal communication skills are essential for pretesting

b) Main guidelines for testing pictures

In addition to the points above, there are some "rules of thumb" which should be followed when testing pictures:

Introduction

- Select an undisturbed place for individual interviews.
- Invite the respondent to ask questions before you test the pictures.
- Explain at the beginning of the interview, and reinforce it whenever necessary, that there are no wrong answers to the questions you ask. You simply want the person's opinion, and you are asking many people the same questions.
- Reinforce that you are testing the form, not the "intelligence" of the people. (You are actually testing your team's ability to portray community ideas, etc. correctly!)

Methods

- Test the pictures one by one. When you have several versions of the same picture, you should first test each picture individually for comprehension, and then put all the versions in front of the respondent and ask which one he/she prefers, and why.
- Ask open-ended questions, and probe on the answers. Keep an informal tone.
- A very useful probe is: Could you please tell me/say something more about this...

During the interview

- The interviewer should keep full attention on asking questions, probing, and maintaining good communication with the respondent. Leave the writing to the recorder.
- Keep a neutral but friendly expression when asking the questions, and throughout the interview.
- Give neutral but encouraging feedback throughout the interview, e.g. "Uhm-hm", "thank you", nodding, or whatever is culturally appropriate.
- Listen carefully and attentively. Avoid creating a situation where the respondent will have to repeat an answer - the respondent is bound to think she/he was wrong the first time if you say "pardon me" or "can you say it again please" and may feel embarrassed or anxious.

Dealing with "disturbances"

People are curious and will gather around the interview: it is an event, and most people find it entertaining! Sometimes this will disturb, and sometimes it may help to relax the situation. You have to decide what will give you the best interview, without alienating people. If they stay, request on-lookers to let your respondent answer without prompting from others. However, if they want to be interviewed themselves, they should stay away until it is their turn - otherwise their answers will be influenced.

Be aware that men - and sometimes young boys - will make a point of laughing at women who give a wrong answer. This can be embarrassing and very disturbing to women, especially the illiterates.

Women are good at establishing trust

- Confidence and trust is essential to obtain - and maintain - the attention of your respondents. Experience in Yola showed that participants tended to be more relaxed with women than with men as interviewers.
  The men were good at recording the information.

Non-verbal communication betrays

- The tone of your voice and your facial expression will betray your feelings if you don't watch out (i.e. control it if you think the respondent has said something stupid!): 80% of the communication we send out is non-verbal, which includes the tone of the voice - this means that people will respond much more to the feeling underlying the words you speak, than to the words themselves. Neither the interviewer nor the respondent may be aware of what is happening, but - the respondent will feel it if you judge him or her, and will react negatively. The contact and the interview may be ruined.

Helping, or giving clues

- Rephrase the question, if you sense the respondent has not understood. However, give the respondent time to think before you do this - remember people in the community may be used to another pace of life and conversation than urban-based researchers.
- If there are many pictures on a page, or many "ingredients" in a picture, you can "help" people by pointing to an easy part of the picture, or page, to get them started. Instruct the recorder to always note if you give such clues.
- When the respondent asks you a question about how YOU would interpret the picture, turn the question back to him/her, repeating what she/he has said before, following up on this. If the respondent insists, then tell him/her what someone else has said about the picture - choosing a response that is close to what she/he has already said. Basically, the respondent is feeling insecure about his/her own opinion, and needs reinforcement that she/he is doing OK. You must decide if you have to discard the interview, if you give the respondent too much "help".

AVOID THE FOLLOWING AT ALL COSTS:

* Telling people (or showing non-verbally) they are wrong;
* Contradicting people;
* Arguing a point;
* Teaching;
* Talking with your recorder during the interview;
* Talking with other community members during the interview, except to give information/request them not to "help";
* Asking challenging questions like "Did you understand"?
* Asking leading questions (which can be answered by Yes or No)
* Testing too many pictures. Ten to fifteen is usually the maximum;
* Using expressions like "show me" or "point to", as they tend to be directive or instructional.

Thank you

- At the end of the interview, thank the respondent for his/her contribution and time.

B. Specific Methods: How to test for the different levels

a) LEVEL I: Literal Interpretation of Pictures

Testing for recognition, familiarity and acceptability

As noted in 3.3 B, most illiterates will see pictures as **representations of objects, not as giving a "message"**. Thus, it would be most appropriate and realistic to test the pictures mainly from this perspective.

Develop a question guide for each picture you are going to test (the "Core" questions will be the same for several of the pictures). DO NOT DEVELOP A QUESTIONNAIRE - it is impossible to carry out pretesting with a set questionnaire, as you have to probe and follow up on many of the questions depending on what people say. Pretesting is usually done as a semi-structured interview, where some main questions are formulated and asked to all respondents, and then followed up in different ways.

The question guide should cover the aspects of

Recognition:
"What do you see in this picture?" and "Please tell me more about what you see", and relevant probes.

The Ibos in Nigeria commented: "This is not our kind of house." The picture had to be redrawn.

Familiarity:
a) With people/style: "Where do you think this person comes from?" or "How does this person appear, compared to people in your area?" or "Could this happen in your community?";
b) With the idea: "What is happening in the picture?" or "How do you (carry out the activity) in your area?"

Acceptability:
"How do you like this picture?" or "Is there anything in this picture you think people in this community would not like?"

You are asking the respondent to describe what she/he sees in the picture, i.e. the literal interpretation of the image(s) and the activities. This is usually not felt as a threatening or difficult task, as long as the respondent understands that there are "no right or wrong answers".

The purpose of this testing is to identify problems related to the aspects above, and decide whether the problems are due to lack of appropriate portrayal of the topic, lack of technical clarity, or the respondent's lack of experience in "reading" pictures.

The main method used at this level is **individual interviews**, with **open questions and probing.**

Once the problems have been identified, it can be very useful to have 2-4 group discussions to come up with suggestions for developing the next version.

It is advisable to have the artist participate in the testing, but she/he should remain quiet, and not even say she/he is the one who has drawn the pictures (people may feel reluctant to criticize someone's work when they are present, even when invited to do so). Sometimes the artist can make him/herself known after the testing in a community, and make new sketches with suggested changes to the drawings on the spot, and get feedback from the (group of) respondents. This is especially appropriate when working with a group of distributors who will carry out the work together, using the form.

Some artists function as recorders for the interviewers - this cuts down on cost. The artist can then still make the adjustments to the drawings at the end. If you follow this method, be sure to work on photocopies of the original, and

test the same (original) version in several communities before deciding on final changes.

The results from the testing should be used to improve the pictures. If comprehensive changes had to be made, a new test would be necessary. It can sometimes be practical to combine the new test with starting the test for Level II.

When you are learning to carry out this work, you will find it easier to get clear results when you separate the testing of literal interpretation from the testing of abstract interpretation/analysis (Level II) described below. Respondents also find it easier to deal with one level at a time. As the action required to solve problems identified at each level is also different (Level I - improve the picture; Level II - improve the training), trying to do both in one session usually ends up with confusing results.

b) LEVEL II: Abstract Interpretation - The "Meaning" of Pictures

Comprehension of the "idea" or "message" within a picture usually requires that the respondent has experience with pictures as a teaching tool, or experience with learning from pictures. A person will learn relatively quickly if exposed regularly to such teaching. However, one cannot assume that everyone already has the skill to interpret pictorial messages.

An example/illustration of the difference -

illustration no. 4, page 1, bottom left of the "Oncho form":

Level I - Literal interpretation:
A group of people. Pills surrounding them, linked/connected by something.

Level II - "Meaning"/symbol/abstract interpretation:
Number of people who have received pills.

If the respondent interprets "correctly" the literal meaning ("correct" here meaning according to the artist's intention, not to an "objective reality", which does not exist), chances are very high that he/she will accept easily the abstract interpretation, once explained. The picture "makes sense", and is a good basis for further explanation of ideas/abstract meaning. If the picture can NOT be readily understood for its literal meaning, it is also very difficult to expect the abstract meaning to be accepted and remembered.

The idea of **connections between pictures** is an abstract notion much used in educational materials, and in pictorial forms (e.g. in the "Oncho form", distributors were supposed to understand that the pregnant woman in picture 10 is the same as the woman with a small baby in picture 11, who comes for treatment two weeks after the baby is born. See page 28).

Understanding such connections is an abstract task which usually has to be taught.

Develop a question guide, as for Level I. The questions should cover the aspect of "meaning"/intended "message" of the picture, and (when applicable) of the series of two or more pictures. For example:

Meaning:
"Looking at this picture, what is it telling you?" or "What can you learn by looking at this picture?".

Connections:
"Looking at these pictures together, what can they tell you?" or "Can you tell me a story, using these pictures?" (If you ask directly if people see a connection, they will often say yes, even if they have not seen it originally).

The connection between pictures is often not seen by people not used to reading pictures.

Please observe for **At what stage** (if at all) people see the connection between the paired pictures - e.g. after having interpreted two or three "sets" or pairs for **Level I**, or only after you having explained the connection for **Level II** (once? twice?). This has implications for how you would teach about connections.

When asking for "meaning", you are asking the respondent to **analyse** what she/he sees in the picture, i.e. the **abstract interpretation** of the image(s). Most rural community members (and many urban ones) will find this a very difficult task. Often, you will get "strange" answers (Strange, because they may not be logical to you), as many respondents will try to answer something, to please you - even if the picture does not "mean" anything at all to them.

The purpose of testing at Level II is to establish:

- Whether the respondent is familiar with the idea of a picture "carrying a meaning";
- whether the picture is a good basis for teaching the meaning, and
- if the picture will - once explained - trigger the memory of the "right" understanding.
- For CONNECTIONS, in addition: whether the respondent is familiar with the idea of Situation (picture) "A" causing (or leading to) Situation (picture) "B";
- What makes him/her realize there is a connection (i.e. does she/he know the concept of the connection, or is there something in the pictures which facilitates the understanding), and
- Whether they can correctly interpret the connection.

The main method used at this level is the same as for Level I: individual interviews, with open questions and probing. Group testing can be carried out if the picture is to be used as part of group activities. It is, however, always advisable to concentrate on individual testing as the main method, as this is where the main weaknesses of the picture(s) will become obvious.

The results from the testing should also be used to design part of the training programme on how to use the form.
Thus, group discussions can be used to investigate how the pictures can best be explained in the training.
The trainers for the community members who are going to use the form, should participate in the testing of Level II.

c) Comprehension of the form as a whole

After testing the individual pictures, the form as a whole should be discussed. This should only be done when individual pictures are reasonably well understood.
It does not make sense to discuss the ideas and concepts of the whole form if respondents cannot make out what most individual pictures are supposed to mean.

This testing is best done in small groups, and should address the following aspects:

Complexity:
Is the form too complicated? Are there actions or topics distributors find irrelevant? Difficult to deal with? Difficult to explain to community members? It is important to ask for the reasons for the problems in each case, to be able to address the issues well in the training (for those problems which cannot be solved through changing the form).
If the form is too complex, how could it be simplified?

Conceptual clarity:
Do the concepts make sense, do they follow the logic of the community? Can respondents relate to the concepts, are they familiar (or too abstract)? Do concepts follow each other logically (if several concepts are put together)? Would community members carry out the actions in this sequence, or in a different one?

NOTE: An initial discussion about the form as a whole should be held at the end of testing the form for Level II - meaning; this will give useful initial indications of where problems lie. Another discussion should be held after testing its operational use: When distributors use the form in their actual task, a different set of problems will emerge. Both stages are important.

Recommended sequence for testing:

1. *Test for Level I - individual pictures - literal interpretation.*

*NOTE: As explained above, it is recommended to separate testing at this level from level II. The purpose at Level I is to identify the problems of the pictures. You will obtain "perfect" pictures which are being "correctly" understood by the majority of respondents. You want to assess - * whether the new respondents do interpret the pictures "correctly", and * what the respondent actually sees, as a basis for interpreting "meaning". (If you go straight to level II, you may make very wrong conclusions about the reasons for the interpretations.)*

2. *Test for Level II - Individual pictures* (including individual pictures in a series).
3. *Level II - Test for connections* between pictures.
4. *If there are problems with the interpretation* - Explain what the pictures were supposed to indicate, and tell the respondent you can see the artist has not managed to draw the topic well. Also explain that it is common that people do not interpret the meaning of such pictures, that this has to be taught, and ask for his/her assistance to find the best basis for teaching this idea to your respondent and his/her colleagues.

5. *Test the form itself* - the comprehension of the concepts, and the form as a whole.

6. *Test the operational use* of the form.

Steps 4 and 5 can be done in a group. This is especially appropriate if there is a group (or a pair) of distributors in a community, who will work together, using the form.

C. Recording the answers

When testing pictures, it is advisable always to work in a pair. Experience has shown that the interviewer asks better questions, and especially probes deeper, when she/he does not have to write down the answers as well. There is a much better flow over the interview when the interviewer can concentrate fully on the respondent.

The quality of information you collect will be much better when the the interviewer is free to concentrate all the attention on the respondent. The recorder sits in the background.

It is not necessary for the recorder to have research skills, but it is a definite advantage: The skilled recorder can make the interviewer aware (after the interview) of questions that were asked wrongly, questions that were not followed up, non-verbal signs that were disturbing or encouraging, etc., and the team can together gradually improve their methods.

In the appendices, you will find samples of the recording forms used in the COMDT study. The following main points are stressed:

One sheet per picture:

Use one sheet of paper for each picture/symbol or illustration, and record answers from all the respondents on this sheet. This system will make it a bit more cumbersome to record the answers, but it will make the analysis of the results, and the decision to be taken about each picture, much easier.

Respondents:

Record the sex of the respondent, the approximate age (make an educated guess, rather than asking), and whether the respondent is literate or illiterate (L/IL). *NB: Ask about literacy at the end of the interview only. If you ask in the beginning, people will often be inhibited. Often, the literacy question will surface informally during the interview, and can be dealt with naturally.*

Record verbatim:

It is important to record the responses as much as possible *verbatim*, rather than just record "understood" or "not understood", or "ticks" and "crosses". What people say will give you an indication of the "trend" of the responses, and within what range of expressions/interpretations you are operating. This is needed to be able to make a decision about the degree of understanding, **how** a picture should be changed, and also (where applicable) to make comparisons between

countries about what are common principles of perception of different aspects of the pictures.

It is not recommended to use a tape recorder, except in combination with recording sheets. Unless your research is focusing on details related to how people express ideas in the pictures, a recording form will usually be sufficient.

D. Level III: Testing the Operational Use of the form

You now have a pictorial form which is being well understood by the intended users.

The next step is to develop the programme for the training, as well as an assessment/evaluation tool to determine how the form works in practice. As training for community distributors is well described in the APOC-guide (see literature list), we will in this section focus on **WHAT can be measured** (development of an assessment tool), and **HOW this can be done** (methods of assessing the quality of the information collected).

In the examples mentioned here, the researchers have functioned as the trainers, and also carried out the testing of the tools. As noted earlier, it is strongly suggested that you also (or instead) let local health system trainers carry out the testing, under your supervision.

This is a real challenge which most researchers are reluctant to take. However, it is the phase in the operational research which will determine whether the "solutions" developed will work in real life.

The multi-country study did not carry out this research, and there is thus no tested out strategy for this phase. It is strongly suggested that researchers develop this strategy!

Community women used the form to "treat" their community, and gave thoughtful advice on how to improve it.

a) Planning and piloting the training

The research team should keep the training in their mind throughout the process of developing the form, noting what seems difficult for the "test distributors" to grasp - of skills as well as of understanding the concepts and ideas portrayed in the pictures.

The first training should be done in the community where the form has been developed. A formal training programme may not be necessary here, as people you have worked with have learnt the informal way - which is frequently the most effective one. However, you can ask your "test distributors" to help you plan by pointing out e.g. what was most difficult to grasp about the form, and about the distribution system, and advise you on contents and methods of the training programme.

You can then e.g. carry out the training in their community, with new community members selected for the purpose of running a pilot training, and ask your "test distributors" to observe and comment as well. These will by now be your best and most honest advisors, having discovered that you seek and respect their opinions. This is immensely valuable in such operational research, and it takes a long time to build up such trust and confidence in another group.

It is recommended that the "real" medicine be given at this time, as people will not appreciate being given "mock" treatment.

The training should then be conducted in a new community.

After the training, the distributors should be requested to discuss with the community leader(s) when to carry out the actual distribution. The research team should then come back to the community to observe the distribution, or do an indirect assessment.

EXAMPLE: During the validation exercise for the "Oncho form" in Nigeria, the research team missed the distribution of the drugs. They had agreed with the distributors during training (at a central point) to come to the communities after one week to observe distribution, and had given out ivermectin to the distributors after finishing the training programme. However, when the distributors returned to their communities, the leaders insisted that the ivermectin should be distributed immediately, and this was done within 3-4 days. Thus, the researchers were forced to resort to indirect assessment of the use of the reporting form (see description of methods, below).

b) Development of assessment tool

You can develop indicators for what to measure in the testing. For the "Oncho form" testing, the team decided the following were important actions for the distributors to take:

Asking:

a) If the person has taken the drug during the last 6 months;
b) If a woman, asking if she is pregnant**

*(NOTE **: Pregnancy was an exclusion criterium: However, the drug is now also given to pregnant women. We have, however, retained the examples related to pregnant women in the subsequent text, as we feel the examples could be relevant for possible other drugs to be tested, and these examples are based on real experiences during the ivermectin distribution in Nigeria.)*

Doing:

a) If "taken drug" or pregnant, explaining why they cannot get the drug, and noting this on the recording form;
b) Using height measurement (after exclusion)
c) Giving correct dosage of medicine
d) Swallow pill(s) with water
e) Recording number of tablets given on the form

Giving info

a) No alcohol for two days
b) Possible side-effects of the drug, and what to do if they occur.

An assessment/evaluation tool should be developed for how to measure these (or other) aspects. The tools could be different for house-to-house distribution, or central distribution (e.g. in school, church, distributor's or community leader's compound).

c) Methods of assessment

You will need to observe and assess for problems which are due to the **construction of the form itself**, and those that are due to the **inadequate training or orientation of the users.**

Different methods will be needed for direct observation (during distribution), and for indirect observation (after completing the distribution).

Method A: Direct observation, House-to-house distribution

In Yola, Nigeria, the following method was used to assess the use of the "Oncho form". The method can be adapted as needed.

Before the assessment, discuss methods with the distributors, and find out how observation can be done as unobtrusively as possible. The distributors should know the purpose of the observation, and consent to it being done.

A. Give forms to the trained distributors, one form per household and one other general form for collating information for all the households treated. Also give the medicine to be used.

B. Let each distributor treat about 10-20 households, usually the size of a ward.

Direct (unobtrusive) observation of the distribution, followed by discussion with the distributors, is the best method to identify problems with the recording form.

C. The distributor should leave the treatment form in the house that has been treated after completing it, and should remember to duplicate the information in the general form (which will contain all those treated in the entire ward).

The researcher (or the PHC staff on the team) checked the use of the form, using three methods.

1. *Direct observation of the distributors during the distribution.* The researcher placed him/herself at a respectable distance (3-10 metres), from where he could still hear what was going on. This method was useful for getting an idea about the qualitative aspects, see how the distributor carried out the work, and what was missed in the treatment. It was also useful to observe how the issue of "pregnant women" was dealt with.

2. *After the treatment the researcher moved from house to house to check the forms*, using the following method:

- The researcher asked to see the form;
- He requested all the members of the house to come out, and asked who were treated, what dosages were given, and categories of those who were not treated (sick, pregnant, refusals).
- He noted the number indicated in the household treatment form against the number in the household for each response.
- He checked that marks were made in the appropriate box, and if entries made reflected the household situation.

3. *The researchers discussed with the distributors after the distribution*, to assess their perceptions of the problems they had encountered, and how these should be dealt with.

The comparison between the researcher's check and the distributor's original treatment was an accurate measurement of the correctness of the distributors' performance. The observation gave useful information about the quality of the interactions, where the problems were encountered, and what could be the reasons for the problems. The discussions with the distributors gave further information about the distributors' perceptions of problems and solutions, and made a useful **triangulation of methods.**

Method B: Direct observation, Central Point Distribution

A similar tool as above should be developed. However, the issue of pregnant women and refusals will be handled differently from the house-to-house distribution: The community leader (with the researcher) has given information about the distribution, and also about pregnant women not being eligible. Thus, they will probably not come, saving male distributors the embarrassment of asking.

Discuss with the community members how to deal with this issue.

NOTE: Be sure to discuss this separately with a group of women, and take their advice. It is NOT enough to discuss this with the men, even if the men insist that this is the case! It would be wise to discuss with the women first, to avoid the men losing face if they have already suggested a different strategy.

The checking can be done at two points: One researcher observing the distributors measuring, distributing and recording, and another researcher re-checking the community members who have been treated, measuring them and noting their treatment in the form. A comparison of the two forms should reveal where the problems are.

Method C: Indirect observation

This can be done if the researcher for some reason misses out on the distribution. However, direct observation will give more reliable results.

First, discuss with distributors individually, to find out how they have been doing the distribution, how they have used the form, and what difficulties they have had in using the form.

Secondly, a mock distribution exercise can be done, where distributors are asked to measure and decide on treatment for a number of community members, while the researcher is observing.

Thirdly, a discussion can be held with the group of distributors, to discuss the problems they have had, and make suggestions for how to deal with them.

"I can give you treatment when the baby is two weeks old."
Drawing by Yola artist.

4. Selecting Trainers and Planning the Training Programme

Assess background of distributors

The background and previous experience of the distributors (or whoever is going to use the form) will have to be assessed before a training strategy and methodology is developed. Furthermore, the background and experience of the intended trainers, especially related to their familiarity with participatory training methods, should be taken into account when determining how training can be conducted.

Many researchers train their own field workers who will carry out the training of the distributors during the research period. Depending on the background and experience of the researcher her/himself, this training may be of very high quality and enable the field workers to use e.g. good participatory methods to train the distributors.

The effect of training quality on success of the programme: The danger of this practice is that the quality of the training given during the research period may not be attainable in practice (i.e. when the people responsible for the implementation are going to carry out the training, they may not be familiar with the (participatory) training methods used during the research period, and on which the success of the project depends). To assess for likely impact in "reality", one would have to work with trainers from the institution which will be responsible for the implementation of the project.

For example, the training of the community distributors to use the "Oncho form" will be carried out by PHC workers. The training methodology used during research was mainly participatory. The PHC workers have not been trained in the use of participatory methods - their own training is carried out using mainly didactic methods (lectures, theory), and this is also how the PHC workers will train others. It is an open question how important this is to the success of the programme: Maybe the community distributors will pick up on the basic important points regardless of "good" or "bad" training methodology; or maybe the use of didactic training methods will mean that distributors will attain a lower compliance rate and make more mistakes the first year, and then learn from experience (and maybe supervision) and improve the performance the second year.

TDR (or others) may investigate these factors in operational research to use the "Oncho form" with the PHC workers, and be able to assess which factors influence the quality of the performance of the community distributors.

Unrealistic assumptions made?

Many researchers build the recommendations for the implementation on the assumption that training programmes can be conducted for those who will train the users of the form, e.g. the PHC workers. This is usually unrealistic, unless

organized and paid for by donors, as the health system has its set priorities, limited budgets and very limited flexibility to include new topics. Moreover, participatory training methods are often not seen by health decision-makers as important or even desirable, as they themselves have usually been brought up in the "didactic tradition", and see this as functional. This method also allows the trainer to keep control and maintain power, which is seen as very important at all levels in the hierarchy.

Thus, it is essential for the researchers to take the questions of training level and methodology into consideration from the planning stage onwards and throughout the project period. The researchers should avoid making assumptions which may prevent the implementation of the results of the research to succeed, e.g. the difficult reality of the primary health care system.

Participatory training methods are essential to the success of training community distributors.

5. Analysing Results of the Testing

A. The Individual Pictures

a) LEVEL I: Literal Interpretation

In your analysis of the results of the **literal interpretation**, you should aim at answering the main question:

- *How do respondents describe objects and actions?*
- *Is the perception a good basis for comprehension - or teaching - of the "message"?*

Please also consult Chapter 6, A, which summarizes research results on visual perception.

The following steps should be taken:

1. Summarize comments related to:

a) **Recognition** of objects and actions portrayed in the picture;

b) **Identification** with persons and environment;

c) **Identification** with the actions (perception of relevance to own situation/actions)

d) **Acceptance** of the people, environment and actions as OK/non-offensive.

2. Then, summarize and conclude for each picture:

a) **Is the picture understood easily?** If yes, what could be the reasons? (e.g. technical clarity of image, familiarity with idea/image, etc.)

b) **If there are problems in understanding the picture, what are the (probable) reasons?** Please note whether difficulties were due to any of the following:

i) Lack of technical clarity of picture

ii) Size of picture

iii) Unfamiliarity with the type of people portrayed: Ethnic background, clothing, housing etc.

iv) Unfamiliarity with the idea, e.g. breathing difficulties, dizziness, etc.

v) Unfamiliarity with "reading" pictures.

c) **Action to be taken:** Based on the analysis in b), and on discussions held in the field (with groups, to suggest how pictures could be improved), instructions for drawing the next versions of the pictures should be developed. The artist should participate in these discussions.

This analysis should be done for each version of the pictures. The final analysis for the report should include the different versions of each picture, results of the testing, and action taken to prepare the next version, until the final version is reached.

Some saw this as "a sick and worried man, probably blind": Technical problem with how the eyes were drawn, and holding the head with two hands was unnatural to show "just worried".

b) LEVEL II: Abstract Interpretation

The results of this analysis should be used to **formulate the training** programme for explanation of pictures and use of the recording form, as well as **writing a research report/ paper.** When developing your analysis tool, keep in mind the two purposes.

1. Summarize comments related to the following on intended meaning/abstract interpretation:

a) Comprehension: Is the meaning clear? Or only to some people? How many, and who are they? Can they be used to explain/teach to the others during the training programme?

Those who do not understand, do they misinterpret (in which case you have a problem), or simply not know that a picture can carry a message (in which case it is simpler to teach them)?

b) Connections between pictures: Do people (how many, who) see ANY connection between e.g. picture A and B (if e.g. "A" is meant to cause "B")? If they see a connection, is it the "right" one? If another connection, is it close enough to the "right" one that only adjustments in comprehension are needed, or is it simply very wrong?

Is connection seen only after probing, or after giving clues? If you have a series of "Cause-effect" or "Before-after" sequences, is connection seen easier/quicker at the end of the series (i.e. is there a learning effect from simply seeing/ testing a number of these picture sequences)?
Also note how many people see no connection.

2. Analyse the reasons for the problems for each picture

Note which problems are due to the **construction of the pictorial form**, and which ones are due to **people not being used to interpret "meaning" from pictures:**

a) If the idea is understood easily, what could be the reasons?
NOTE: It is important to analyse why something is understood well: This insight helps you decide how to improve other pictures.

b) If there are problems in understanding the idea, what are the (probable) reasons?

i) the idea of a connection between two pictures is unfamiliar;

ii) the idea of symbols is unfamiliar;

iii) many people interpret each part of the picture separately but do not see the picture as a whole, etc.
NOTE: See chapter on "Issues that influence the perception of the form" for background on problems.

c) Action to be taken: Note for each picture what needs to be done to help people understand the idea/abstract meaning behind the picture (e.g. "Instruct those who train the community distributors to explain this picture carefully when going through the form during training, as pretesting has indicated this idea is difficult to understand.") In other cases, the meaning may not make sense to people, and you have to make a new picture.

B. The Form as a whole

When you have completed the analysis of the individual pictures, you should address the form as a whole:
The questions asked after testing for level II (results to be used to revise form and to develop pilot training programme), and those asked after testing the form in operation.

Decisions about the implications of the analysis from the two stages may be different: If difficulties experienced initially with the form can be successfully addressed in pilot training, you may decide to retain these problematic parts. However, beware: such problems have a nasty tendency to grow bigger when the project is left to function on its own! If difficulties persist after operational testing, need for change is obvious.

See Chapter 6, B, on analysis of the "Oncho form" from Nigeria.

Two main issues should be analysed:

Complexity:
Is the form too complex? Are there actions or ideas or topics respondents find too abstract, too difficult to deal with, or to explain? Any which are irrelevant?

What are the reasons for the problems, and what are the implications of the analysis for a) Changing the form, b) Training, and c) Including the topic in the assessment tool?

If the form needs to be simplified, it might mean negotiation with those who have given the requirements for what information should be collected, i.e. health managers, or drug company. If you see early in the testing that this is likely to be the case, it is a very good idea to invite a representative to come to the community during a test of the form, and observe the problems and also discuss with the potential distributors. Experience has shown that this method is the most effective in convincing decision-makers to agree to change.

Chances are high that you will develop a tool which is too complex. For the Oncho form, the original five pages of information were eventually cut down to one.

Conceptual clarity:
Do the concepts, as they are depicted now, make sense? Do they follow the logic of the community? Do concepts follow each other logically? Can the respondents relate to the concepts, are they familiar?

Examples of specific questions which were asked on this aspect for the "Oncho form":

- How does it work to have side-effects and summary together on the last page - is there any confusion?
- We have combined the male and the female interviewer - using sometimes both (in the symbols), sometimes the male and sometimes the female. How does this work?
- Are respondents able to recognize that the distributors - both the male and the female - are the same people throughout the form? Do they have any preference for which one(s) should be used, and why?

Finally, summarize the implications of the findings and analysis for the design of the pilot training course, both related to contents, and to methods of teaching. Revise, with a new analysis, after the operational testing.

c) LEVEL III:
The Operational Use of the Form

The analysis of this level was not consistently carried out when testing the "Oncho form". The validation carried out in Nigeria attempted to analyse the form for constructive validity, predictive validity and content validity, however, because the researchers could not observe the distribution directly, the results are of limited usefulness.

It is suggested that you attempt to use three different methods for testing operational use (e.g. those described in Methods of Assessment, Ch. 3.4), and that cross-checking and triangulation of methods are used to validate the results.

Your analysis tool should separate problems due to construction of the form, and problems due to the methods and contents of the training.

A tree can be marked as a measuring tool to check people's height, to determine how many tablets they should get. Drawing by Yola artist.

6. Visual Perception: Principles and examples

A. Developing illustrations for use by (literate and) illiterate audiences

When developing the **"Oncho form"**, the research team based their work on a number of principles and rules derived from research and experience on visual perception among illiterates. This research has been carried out in a number of different countries in Asia, Africa and Latin America, and confirms that there are a number of "universal rules" which apply.

The results from testing the form in Nigeria, Mali, Cameroon and Uganda confirm these rules. Below is a summary of practical implications of the principles of visual perception among illiterates, to be kept in mind when developing illustrations for such groups. The examples referred to are from testing the "Oncho form" in Nigeria, Uganda, Mali and the Cameroon, and page numbers refer to the "Oncho form" in Appendix 1.

1. **Use shaded line-drawings.** These are (relatively) easy to draw, and they photo-copy well. Our artists started with pencil-drawings, made corrections based on people's comments, and then inked the final product.

2. **Delete extraneous details.** Include in each drawing only the items strictly needed for recognition of the action/ situation (i.e. do not add artistic "blobs" or artifacts to create "atmosphere" - these will confuse).

3. **Draw each item clearly,** i.e. do not draw items overlapping each other (exception: in the "Oncho form", pictures of a group of people, page 1, and total population, page 5, which presents a "uniform" image, were readily understood).

a)

b)

The overlapping figure on the man's head (a) was confusing, and had to be removed (b).

4. **Make figures moderately culture-specific.** We tried to make the people as close as possible to "generic Nigerians", i.e. by making them culturally recognizable in the Yoruba culture, but not using specific things e.g. tribal marks, very typical ethnic clothing, very characteristic houses, etc. When the forms where pretested in four different areas of Nigeria, there were no problems in identifying or relating to the persons portrayed. However, we do not know if the forms, when not explained (well) by a researcher as a part of a project to test the form, will be equally well accepted and identified with.

   Comments from Uganda, Mali and Cameroon underline the need for the people and the environment to be culturally specific.

5. **Make the main person recognizable throughout the form.** This can be done by giving him (and her) recognizable "personality" through clothing and facial features. Be aware that clothing is better recognized than facial features, and that the two used together reinforce each other.

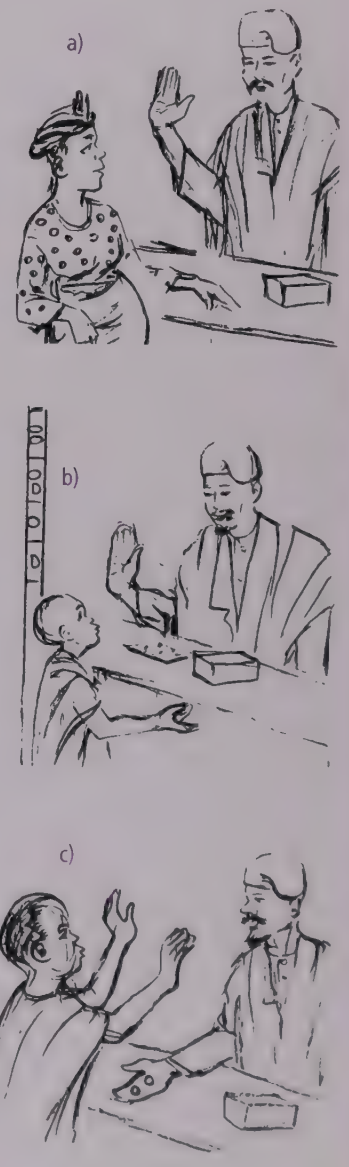
   In Cameroon, they commented that the female distributor was treating only women patients, and also interacting with the nurse, while the male distributor treated only men. This was an unintended effect which should be controlled for.

6. **Bodily gestures are better recognized than facial expressions.** For example, to indicate "NO", we used the hand sign, which was well recognized. The facial expression to indicate "NO" was not recognized. A facial expression can support a bodily gesture, but will not (usually) be recognized on its own.

7. **Small details make a difference.** For example, the hand in the "NO" gesture was held slightly higher in the first versions of the picture, and was then recognized as a greeting. When lowered to the right height, and held more forward, it was recognized as "NO".In Mali, they changed the hand to a waving index finger to indicate "No". It is not indicated whether this was re-tested and understood. It is worth noticing that curved lines next to an object, e.g. a finger, to indicate movement, is usually not understood. However, once explained, it would probably be remembered well.

   In Nigeria, there was a problem with the "Refusals", which was first drawn as a person facing the distributor, holding his hands up. He was interpreted as begging for the medicine.

   When we had him facing his body towards the distributor, holding up ONE hand, and his face turning away, he was recognized as saying "NO" to the medicine.



Attention to details is essential: The researchers were attempting to illustrate "no": The man in picture (a) was seen as greeting the woman, the distributor (b) was seen as saying "no", and the man supposed to refuse (c) was seen as begging

8. **People interpret drawings literally: Abstract symbols are not understood unless explained.** "Symbols" which are realistic and refer to something concrete, e.g. the group of people with a ring of tablets around them (image 4 on page 1), are usually understood once explained, and can be useful reminders. In Uganda, a distributor counted the people and the tablets in image 4, trying to relate them to each other. The abstract intention of the symbol was not understood. Some people recognized this symbol even without explanation. Note that all other "symbols" used in the form are realistic representations of the distributor.

   Another indication of the literal interpretation was found in Mali: People remarked that the tablets shown in images 4 and 5 were smaller than those next to the stick (3). The researcher does not indicate whether this presented a practical problem.

9. **Use at least "half" bodies,** rather than disembodied parts (e.g. arms, hands, legs, etc). Disembodied parts without a context are often difficult to understand. A comment from Nigerian village women: "Please let us see the whole bodies".

10. **The size of the picture matters.** Pictures smaller than those on the form can be difficult to understand for people not experienced in "reading" pictures. In our testing, we had initially some difficulties even with the size represented in the form, but once people got used to it, they understood more easily. We do not know what the optimum size is, but we would suggest to researchers to be especially aware of size as a potential problem. Copying a picture in different sizes to find out which size people prefer, could be useful.

   Pictures were used also as health education tools, which is worthwhile noticing in the context of size. If the teams decide to encourage the use of the pictures also for the distributor to discuss certain aspects of the drug distribution with the community members, then size of the pictures needs to be considered carefully. The ones in the present form could be used for teaching with only one or two people at a time.

11. **Certain ideas cannot be expected to be communicated by a picture alone.** For example, "Dizziness" and "Difficulties to breathe", are not easy to recognize.

Concepts like "difficult to breathe" cannot be expected to be understood from pictures alone. The idea has to be explained. This picture communicated the idea well, once explained.

   The drawings were recognized as people being sick, and when explained what kind of problem they had, the respondents immediately saw the connection. Examples from all countries emphasize that several of the pictures need to be explained to be understood.

12. **Connections between pictures cannot be assumed.** The idea that "A" causes"B" is an abstract one, unfamiliar to people not used to being taught with pictures. The connections between pictures on pages 2 and 3 of the revised form - e.g. a man being sick, and the same man getting well and receiving medicine, was not well understood. However, when explained, it made sense to people.

    The idea of the "symbols" of the distributors saying "no" and "come back later" at the top of the page, was in Uganda not related to the other pictures on pages 2 and 3. The panel on top of page 4 - showing distributors worried (about side effects), also was not related to the pictures below. It is questionable if these "explanatory panels" add anything to the understanding.

    In Mali, the "Come back later" (image 7) was interpreted as someone winnowing grain, or having a problem with the left hand. No connection to the pictures below was assumed.

    In neither Mali nor Uganda is it clear if the pictures, once explained, would be acceptable to the distributors.

13. **Summary pictures were difficult to understand.** This is related to these concepts being abstract, and requiring mathematical skills which illiterates usually don't have. However, in the test village in Nigeria, the illiterate women had filled in all the summaries correctly: they had understood what needed to be done, and once they had collected the information and tallied the "treatment", they asked their children to do the summaries.

14. **Too many pictures confuse:** Pages 2 and 3 were felt to be confusing by many of the CDs. One should limit the number of pictures per page, and avoid double pages (which invariably leads to crowding of images).

15. **Technical issues should be carefully considered.** In the revised form, pages 2 and 3 had to be turned to be read, this caused confusion. The layout was done to fit the form on an A-3 sheet, printed both sides. This was in retrospect not a good idea - the two pages were felt to be crowded, the turning was a problem, and A-3 size paper and photocopiers are not available in most places in Africa.

B. Main reasons why the Reporting Form was well understood in Nigeria

The four researchers who tried out the form in different communities in Nigeria reported in general that it works well, and that the illiterate members of the communities could manage the form very well. The response to the idea of illiterates reporting on the distribution was very positive, especially from the illiterate villagers themselves.
In one community some literate community members were sceptical about the illiterates performing this job. This is to be expected. Carrying out such important tasks have been the prerogative of literates, and some of them would like to hold on to the power this gives them.

The main features of the reporting form, and thus main reasons why it worked well, are:

1. **Conceptual clarity.** There is one idea per page. Most pages have a symbol at the top, with the distributor "signalling" the theme, and a summary box at the bottom.

2. **Illustrative clarity.** The principles explained above have been adhered to.

3. **Developed and tested in the communities.** The idea was developed with illiterate community members.

The characters were identifiable as Nigerians in a rural area, but not as belonging to a specific group.

4. **Culturally identifiable,** but as un-specific as possible regarding clothes, houses, etc.

5. **The distributor as a recognizable person throughout the form.** The idea of a recognizable person - with whom they can identify - is important for the perception that "this task (and this reporting form) is relevant to us". The distributor thus needs to be seen as a (respected) person from a rural community. Another version we had was discarded because the distributor was seen as a "city man".

6. **Some pictures need to be explained.** The community members recognized (i.e. literal interpretation) on an average about eight out of ten pictures in the pretest version without explanation. However, some ideas do need to be explained, e.g. "Dizziness" and "Difficulties to breathe". There will be a written explanation accompanying the form, giving the person who will train the community members for the distribution, information about pictures needing to be carefully explained.

7. **Different forms for male and female distributors?** The different forms were developed for the pretest to encourage women to participate. Women very much appreciated the "female form", but men preferred the male version. In the final version, the two were merged.

The aim with the form was to develop pictures which would be self-explanatory to the extent possible, and for the rest, to develop pictures which would be easily recognized and remembered, once explained. **In Nigeria, this aim was achieved.**

In Uganda, there was a question about how the form would work, as people were not used to tallying. Investigations would have to be done about how people count and mark numbers, and a recording system devised based on this. The Ugandan example underlines the importance of not assuming that a tool developed for one situation (or country) will necessarily work in another.

In Cameroon, tallying was not a problem, however, the method used for tallying demanded more space than was given on the sample form. This team also had problems because of many visitors from neighbouring communities coming to receive the drug, and there was no provision for recording this group. This underlines the need for thorough pretesting of the draft form in the "real" situation. The Cameroonian team also commented that when using a central distribution point, many of the categories in the form were not needed (sick person, refusals, people on travel). Again, this underlines the need for making the form for the specific situation where it will be used, with the method of distribution selected by the community members.

7. Potential Conflicts during Implementation

A number of aspects in the communities will affect the way the recording form is being used. The following examples and reflections are meant as background for the researcher to investigate these issues in his/her own communities, and assess the implications of decisions made (especially regarding the gender issue) for the research outcome, as well as for the practical implementation of the project.

A) The gender issue

Men are selected

Communities will tend to select men to carry out tasks like distribution of drugs to community members, unless specifically requested to involve women. Getting women involved requires conscious efforts from the researchers during the research period, as well as clear recommendations to the implementers of the programme who will be using the pictorial form. The basis for making the recommendations must be clearly stated, otherwise they may even be counter-productive. When the implementers are involved throughout the process of the research, they will be more sensitive to the reasons for women playing an important role, and will be more likely to enforce this during implementation.

Women have different concerns

It is usually only the community women who will tell you what are the reasons they should be involved, and what role they think they should play - the men may not even see it as an issue. For example, in the development of the "Oncho form", we discussed separately with the men and the women in the community, both during the exploratory research phase, the testing of the initial pictures and the form, and the testing of the use of the form. We specifically

Women had strong ideas of how the pregnant woman should look. Pictures a) and b) were rejected "because they are painful to look at, the woman is so pregnant she can drop the baby any time!" Women preferred picture c) which was then modified.

requested the community to select a group of six men and another group of six women to work with us. The women had different concerns than the men, and both perspectives were necessary for developing a good pictorial form.

During the testing of the initial pictures, the women had other preferences than the men for the picture of a pregnant woman, the picture of the person travelling, and for how to show the gesture "no". They also saw the representations of the side-effects slightly different from the men.

A special pictorial form was developed for the women, with a woman distributor throughout. The women in the test village were really happy about this, because, as they put it, "We are the ones who are responsible for treating people in the family with drugs when they are sick, and we are used to dealing with drugs. Also, men cannot ask a woman (except his wife) if she is pregnant. We are more used to dealing with the children, the men are often rough with them. So, we need to be involved in this work."

Women were excited and positive

The women - all of them illiterate - were then left with the pictorial form to test out its use in the village. The men were given the other form (identical, but with a male distributor throughout), and also asked to try it out.

When the researchers returned two days later, the women had measured and "treated" everyone in the village (almost 300 people), filled in all the boxes of those treated and those who were excluded, summarized the number of (mock) tablets used, the number to be retained and the number to be returned, and had discovered a number of problems which the researchers had not been aware of.

By this time the women, who in the beginning of the process took care to sit at a considerable distance from the researchers and were careful about what to say, were excited about the project and about their own role in it, sat together with the researchers as if there was no (or minimal) social distance, and spoke about their experiences without being asked to do so. They were proud of their work, and had carried it out with care. They had asked their children, who went to school, to help them calculate the numbers. All the numbers were correct.

The men had also filled out the form, doing a mock trial, and had come up with some of the same concerns as the women, plus a few of their own.

Men thought they could do it

In another village where the form was tested out without giving a special request to also select women, men were the only ones to be selected (after the chief and the community had been briefed on the nature of the task). When asked after they had been selected about how they would deal with the issue of pregnant women, they said this was no problem. At this stage it would have been a loss of face to the men to say they might need women to be involved in the distribution. We were later stopped by a woman who asked what we were doing; when we explained, she asked why no women were involved in the work. She also commented that the male distributors could not ask about pregnant women, and was in general quite displeased with the situation.

Women are most often not asked to be distributors, nor about suggestions for how to deal with pregnant women - or other factors that directly concern them. Thus, if they are to be involved, this has to be suggested and justified to the community leaders before the selection of the distributors has been made.

In the actual distribution of the drugs in Yola, the information about pregnant women not being eligible for the drug was given in the village meeting. Thus, when the community selected a central distribution point to be used (e.g. the chief's house or the village square), the pregnant women simply did not turn up, and the male distributors did not have to deal with the problem. Those who did house-to-house distribution, however, did often face the problem. It was e.g. solved by the family simply telling the distributor that "that woman is not taking", saving him the embarrassment to ask. Where women were distributing the drugs, they freely asked this question.

Female interviewers more sensitive

Other researchers in Yola noted that female PHC workers were able to obtain information from both men and women on sensitive subjects much easier than their male colleagues.

Female interviewers were getting better information.

Furthermore, the female PHC workers were better at giving health education to the community (the Yola team used the pictorial form also as a health education tool, with much success).

During the negotiation of the treatment strategy with communities in northern Nigeria, Moslem women would not come out of their houses, and the discussion was a male affair. The team had to conduct another meeting and discussion with the women where issues such as "how will the distributor identify pregnant women?" were discussed. Incidentally, women members of the research team facilitated in both the male and the female meetings.

Male interviewers recorded "refusals"

During the field testing, all members of the household were requested to come outside for treatment. When women members of the household peeped their heads out and noticed it was a male distributor, they retreated inside and politely said they would not receive the drug even though they liked it. The male distributor recorded this as "Refusal". Women distributors did not have so many female refusals: a puzzle that only became clear when women research team members were used as research assistants. The "refusals" were actually pregnant women who, knowing the exclusion criteria and, too shy to inform the male distributor, would rather just say they did not want the drug. Two points are clear: the preference for both the research team and the facilitating team to include many more women

than men. The PI in Yola (a male) chose to take a background role as a clerk while female assistants took over the essential aspects of the interaction.

In meetings moderated by female research assistants many people (especially men) tend to turn up and to participate lively in the discussions, this could be very exciting where the female facilitator is well trained and enjoys the work. With equality of everything except sex, the woman facilitator collects more qualitative information than her male counterpart.

"I prefer women"

The researcher in Yola has concluded that for this community research, women as research assistants in interactive research do a better job, for the following reasons:

- Female interviewers are more acceptable to both sexes than males. The males play a more technical supportive role.
- Women appear more sensitive, they can assess the situation well, and hence tailor their approach. Men tend to stick to the procedure in a rather technical fashion.
- Men tend to lose their composure and temper when the situation they meet differs from the approach they were taught, and even when they try to hide their feelings, these are still obvious to respondents. Women tend to show empathy and genuine concern, hence they create a more friendly and trusting environment and collect the information they need.
- Men are usually in a hurry to cover a stipulated number of interviews per given period. This preoccupation tends to reduce the quality of the information they collect. Women may collect less information, but the quality is much better.
- Women can capture the attention of both sexes. Men love to tease them while women tend to be delighted to confide in other women; they therefore often give much more information.
- Women tend to be more relaxed and homely, and fit easily into the environment, than their male counterparts. Men are usually expected to be outdoors and are not used to talking or listening, but rather to giving orders in the house. This may affect the ability of the male research assistant to relax, and to concentrate on collecting information. A woman will help the respondent with her chores, will touch and carry the child, will taste the meal, will say something about herself or home and show that she probably has the same problem as the respondent; this, a man will never do. Women talk.

The Yola researcher concludes: "No wonder then that my female research assistants get more gifts (chickens, fruits, calabash bowls) and make more life-long friends among the villagers than the male members of the team!"

B) The issue of power and vested interests in the health system

Radical changes in a system are usually felt as a threat by many people working in the system. The nature of the changes may seem clear to the "architects of change" (e.g. researchers), but will seldom be seen the same way by those the changes will affect. Furthermore, suggestions for changes are most often worked out by

people who will not have to live with the consequences or implications of the changes in their daily work. Often, the implications of the suggested changes will not be clear until the new system has been in operation for some time.

COMDT felt as a threat

Community implemented distribution of ivermectin is felt as a threat to many people working in the health system in countries where the studies have been carried out. For example, in Nigeria, some PHC workers were very negative to the research team when accompanying them to a village. The reasons came out later when one of them asked: "What is going to happen to us if this system is introduced? There will be no role for us, and we will lose our jobs". They were reassured by the research team that they would not lose their jobs, as there are so many unsolved problems and tasks to deal with in the PHC work - it would make them free to take better care of some of these tasks.

This reassurance did not allay their fears, however. The research team left the village after the preliminary work was done and arranged to come back with the drugs to observe the community distribution. When they came back, they were not welcomed, and were told that people would not take the drug. The female researcher was very surprised, and decided to talk with people about what has happened. Because she had already established a very good relationship with the villagers earlier, she was able to talk with them, and soon found out that the health workers had been the ones to spread rumours in the village. She was able to slowly convince them that the ivermectin was OK, and they carried out the distribution.

Doctor lost his income

At another site, a medical doctor practising in the district had a comfortable additional income from the sales of ivermectin through drug stores (althought ivermectin is not supposed to be sold commercially). The drug was sold at 160 Naira (two US dollars) per tablet. The doctor was very upset when he learnt that the drug was going to be made available to communities free of charge. He was then appointed Chairman of the local council, and worked hard to stop the project to retain his comfortable income. He did not succeed in stopping the project, and the price for one tablet has now gone down to 50 Naira in the drug stores.

Community-directed treatment can be felt as a threat by workers in the health system
Thus, it is essential to involve them in the research from the initial phase

Local politicians create problems
Local politicians often feel that the empowerment of the community will diminish their status and reduce their power. Some examples from Nigerian villages illustrate this point:

In a village where there had been an inter-ethnic quarrel between the Jukun and the Tiv, the Tiv youth not only boycotted the drug but prevented other Tivs from participating in the COMDT.

In another village a local politician would not go to the village centre to receive the drug and the distributor set aside his own dose to be taken to him at home after the day's work. The politician was not impressed and dissuaded members of his household from taking the drug.

In a third village where there was a chieftaincy tussle, a whole section of the community decided not to take part in the distribution.

In yet another village the fertiliser distributor was so sure he would be the person that would be selected that he got a shock when the village selected an illiterate woman to be the distributor. He left the village during the exercise but did not prevent members of his family from taking the drug.

By far the greatest danger to COMDT is the village politician who may feel sidelined by the community's collective decision: This is a new practice, an unusual thing.

In every village there are such people who, though negligibly small in numbers, nevertheless wield enough power and followers because of the social position they hold. These must be specially targeted for negotiation and education, otherwise they may be an impediment to the sustainability of the programme at the community level.

Health care workers' concerns must be addressed
The questions raised by the PHC workers are important to them ("Will I lose my job? Will I lose my power to decide what the villagers should do?") and need to be addressed - by people within the health care system. It needs to be based on an understanding of the PHC workers concerns, and the definition of a new positive role for them to play, which is made possible by the adoption of the community implemented distribution system.

For researchers developing pictorial forms to be used as tools in implementing projects, it is advisable to ask yourselves (and others) whether the new innovation is or can be perceived to be threatening to the role, status, working situation, possibilities to collect fringe benefits, etc. of any of the people meant to implement the innovation. Usually there will be such problems, as any change is likely to be reviewed with scepticism - and fear.

One good way to find out which problems are likely to occur is to continue working closely with implementers throughout the research period. Implementers could be invited to try out the pictorial forms (and the new/revised system?) in practice without researchers present, and be asked to find out what could give themselves and their colleagues problems in implementing the pictorial form and the suggested changes.

C) Cost-efficiency - a clash of values?

Communities often define cost differently from modern economists. For example, if the community holds a meeting in an individual's compound, the individual is honoured and is expected to recognise that the meeting could have been held in any other person's compound. The individual is therefore expected to show appreciation to the community.

However, in the Western system the reverse is the case. Perhaps the Nigerian practice is based on the principle that in the rural economic system everything is mutually owned. No wonder then that the cost of the COMDT to the community could not be measured in any of the six sites where the multi-country study was done. The villagers could not understand why cost has to be put to a meeting venue when the venue is not carried away after the meeting! Besides, what is the venue meant for in the first place? Some members of the community even could not hide their irritation when asked for the time they spent at the meetings of the village, or the cost of food provided by the community for the distributor. For the community members, time spent at the community meetings is free and leisurely, time spent in the service of one's community is not to be costed.

Inquiries about actual cost of travel may be asked but the researcher should take time to explain why the question is being asked, otherwise the respondent may inflate the amount with the hope that it may be refunded. It should be noted that in most communities the village head is neither paid nor thanked by his people for rendering service to them, because it is an honour to be chosen among many to be the spokesman of the village.

Researchers need to devise some means other than monetary values to assess community input into the treatment exercise. In the community everything belongs to everyone and individuals are merely in custody of the things like food, houses, etc. Perhaps this is why no one is allowed to starve in the village and no one sleeps in the street. People simply do things for each other and everyone has some rights such as to food and to a place to sleep. An understanding of this will help us appreciate why the cost of treatment could not be accurately investigated in the multi-country study.

Community members do not see why cost has to be put to a meeting venue, when the venue is not carried away after the meeting..

8. Researchers' Attitude Change

Researchers, especially those trained in epidemiology and in fields other than social sciences, were initially very sceptical about the study on the pictorial recording form to be used by illiterates. This is not surprising since they are more used to experiments in the natural sciences with controls. Besides the concept did not sound appealing, it seemed a less than serious theme to waste valuable research time on. The idea did not just fit into what they were used to regarding as research.

As ideas were exchanged about the concept, the initial scepticism and pessimistic expressions gave way to some sort of " wait and see".

Curiosity set in when the research team visited the village to discuss with groups about the symbols that they normally use to represent objects.

Surprise took over when the first set of pictures were made and tested among villagers for recognition and suggestions, as the illiterate members of the community showed that they could read most of the pictures and apply them to situations.

The high point of change in the attitudes of some of the researchers occurred when the forms were pretested in actual field situations in different parts of the country and across cultures, and found to work. In a village in Yola a 65-year-old village head who had never held a pencil in his life was able to use the form after 20 minutes training, alongside some younger men with some form of literacy. The researchers were excited and began to come up with several other ideas about adapting the same approach to other situations.

If there are people in your research team (or among the local officials you are cooperating with) who are very sceptical to these ideas, you may have to collect some examples from the field before getting them "on board". In pretesting, we have found that the most convincing argument for the need for and usefulness of pretesting, is a visual in two or three different stages: The first draft, the comments and interpretations from the audience/pretest respondents, how these were used to make the next version of the visual, and then the comments (preferably positive!) to this new version. These examples work best when the first and the second versions are very different, and when the problems discovered in the first version are "visible" or "logical" only to the community members (i.e. an urban artist could not have been expected to "know" what she/he should have drawn).

A community artist in Yola made his own drawings of the distribution.

9. Questions and Ideas for Further Research

The project on community-directed treatment with ivermectin had some unique features that augured well for its successful implementation. Not all projects for which a pictorial reporting format is ideal will however have the same unique features as the COMDTI project. It is therefore an important and useful exercise to think through carefully, and document in the planning stage, all the components of the proposed intervention from the perspective of what needs to be recorded. Such an approach would be of considerable help in the appraisal and further development of the "reporting with pictures" concept.

Some of the questions researchers could consider are:

- **How is the disease perceived?**
  If the disease is seen as a serious problem, there is more chance that they will participate in a project to deal with it. (For COMDTI, people in the most affected areas are very aware of onchocerciasis, and motivated to cure it.)

- **Mass distribution.**
  Can the drug be distributed to (almost) everybody? (For COMDTI, there was no need for individual diagnosis to assess whether or not the person is affected by onchocerciasis)

- **Dosage.**
  Is the dosage complicated? (For COMDTI, ivermectin is given once, and the people receiving it swallow the drug in the presence of the distributor. This makes it unlikely that misuse (i.e. that some people do not take the prescribed dose) takes place

- **How often does it need to be taken?**
  If the drug has to be taken often, there may be a problem. (For COMDTI, the drug has to be taken at regular but infrequent intervals (annual or biannual depending on the rate of infection in the community.)

- **Are exclusion criteria manageable?**
  Are the people to be excluded easy to detect? (For COMDTI, those not to be given the drug were: Children under 90 cm, pregnant women, those too sick to stand up by themselves, and those who have recently (less than three months previously) taken the drug. These criteria are few enough and simple enough to manage, and also lend themselves well to pictorial representation.)

- **Are there serious side-effects?**
  If side-effects are common and/or severe, there may be a problem.
  (For COMDTI, the common side-effects, like itching, swelling of the eyes, etc, can be treated with simple drugs, or just left to clear on their own within three days. The severe side-effects that require referral to health facility are rare, and are relatively easily identifiable by an untrained person - i.e. difficulty to breathe, and severe dizziness.)

- **Does the drug have other beneficial effects?**
  If the drug is perceived as useful for more than one problem, it could be even better received.
  (Ivermectin works as an expeller of intestinal worms, and as the majority of the people have some kinds of worms, they perceive this function as a very welcome "side-effect".)

- **The cost of the drug.**
  If the drug is free, or cheap, the acceptance rate will presumably be higher (although people are often sceptical about drugs given for free, doubting the motivation of the donor)
  (In COMDTI, the drug is given out free. This is a real bonus to most people in rural Africa, who are not used to receiving free medicines. It seems as if this aspect does not have the negative effect of raising suspicion that the Government want to achieve something (which they don't tell people) by giving them this drug free. Only time can tell how this aspect will develop. When asked, most people say they would be willing to pay something for the drug, if necessary.)

Why did ivermectin distribution lend itself so well to development of the pictorial form?

The information to be collected for ivermectin distribution had the following characteristics:

- Focused (one disease - one treatment)
- Few variables (people, tablets)
- Simple assessment (height, can be easily illustrated)
- Topic is culturally acceptable (with some potential problems because of exclusion of pregnant women)
- Pictures needed are simple, and require illustration of single actions (giving pills to some people, refusing others, putting pills away, counting pills/giving to HW).

With the above as a "rule of thumb", one could draw up a list of possible topics for research with a pictorial form:

a) **COMDT on other diseases**, e.g. schistosomiasis (bilharzia) and/or worms in school children;

b) **Health status in the community:** Epidemiological data on distribution of diseases among different age groups, e.g. malaria among children, onchocerciasis (presence of nodules and leopard skin), etc.

c) **Longitudinal data requiring continuos information gathering** over a long period of time. This is especially useful in the collation of demographic data such as birth rates, mortality rates, census by age and sex, occupational groups, agricultural produce in an area, village activities by season, etc.

d) **Social data** e.g. on marriage, emigration, immigration, etc.

e) **Prevalence of blindness** and other handicaps by age, sex and occupation.

f) **Information related to personal hygiene** e.g. latrines, ectoparasites, sources of water supply, etc.

g) **Community needs assessment.**

h) **Media survey**, e.g. number of households which have access to radio, TV, newspapers.

i) **TBAs**, who are often illiterate and therefore not thought to be capable of collecting and recording data, could be trained to collect data on **maternal mortality and morbidity**, as well as various aspects of child health.

j) **Health education.** The form has potential as a health education tool when left in the village, with the distributor,

village headman, or other important person. It would be an interesting research question to investigate the effect of an investment in educating the headman (and his wife), and other selected "change agents" or informal leaders, in the use of the form for education (one would assume they must have a role in the data collection as well).

The pictorial form can be a very useful tool for collection of data e.g. on tropical diseases in remote villages, at little cost to the health sector.

However, one should bear in mind that collection of information for the sake of statistics will be of very little interest to the communities. For them to want to spend time and effort on this task, there needs to be a tangible benefit. There should be a planned action related to any such information collection, and the community members should be involved in defining the information to be collected, as well as the action to be taken.

Are exclusion criteria manageable? Drawing by Yola artist.

APPENDICES

APPENDIX 1

The Revised (original Nigerian) pictorial form for distribution of ivermectin

APPENDIX 2

The original written form for distribution of ivermectin

APPENDIX 3

Draft form for reporting Side-Effects of ivermectin

APPENDIX 4

Structure of the testing of the "Oncho form"

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Sample Analysis Form:
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APPENDIX 7

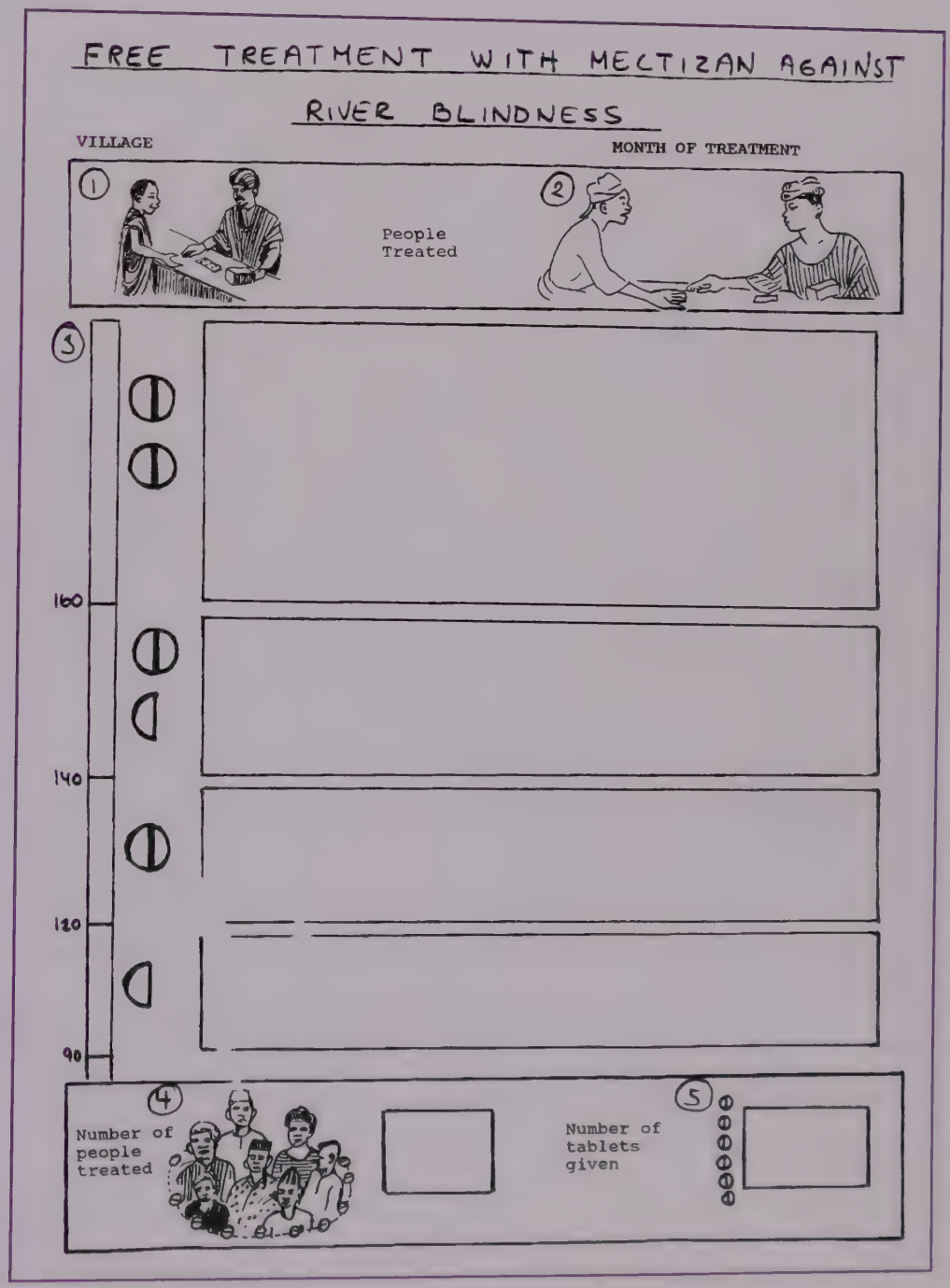
THE "Oncho Form": Samples of "correct" interpretations of the pictures.

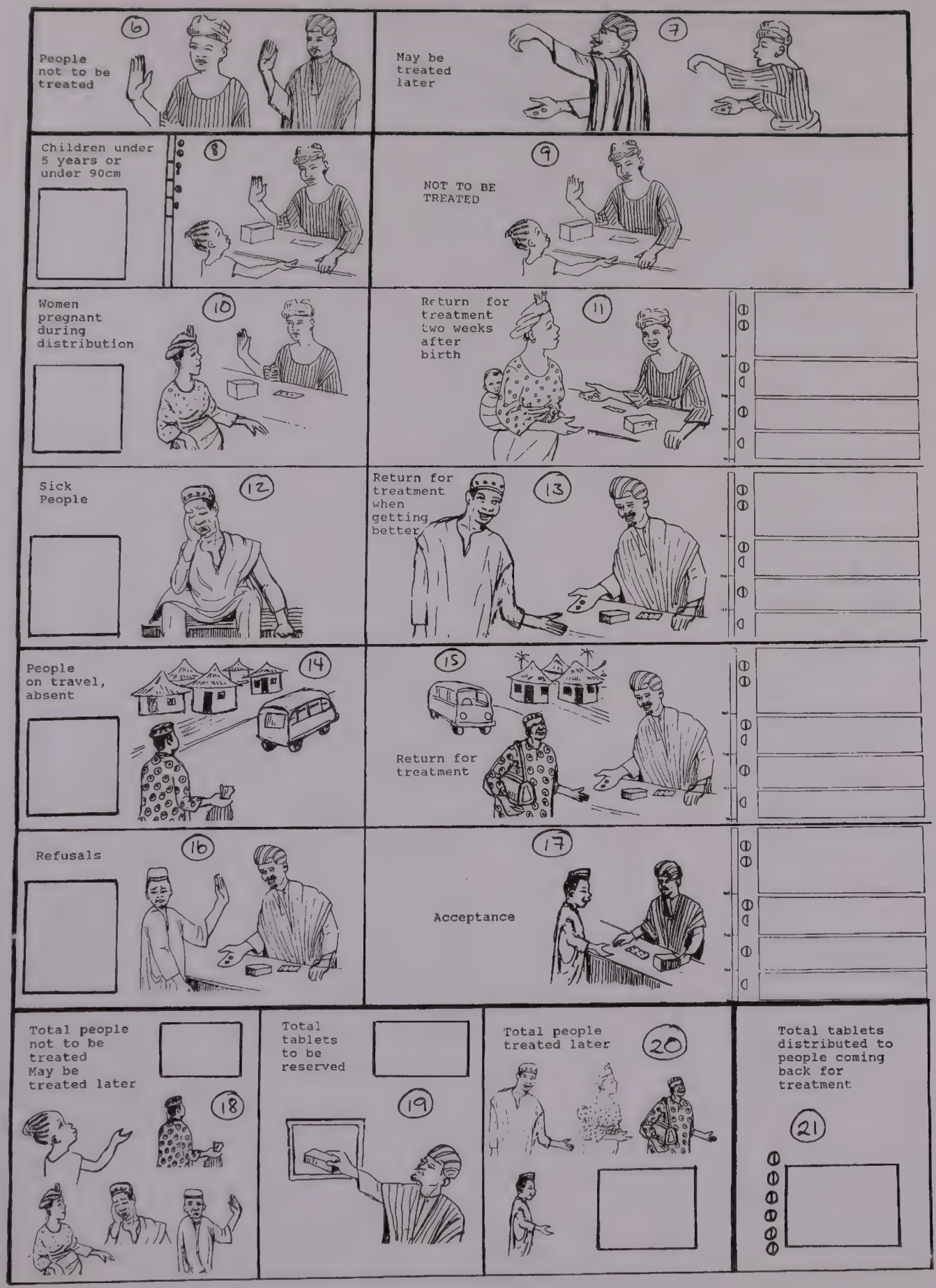
APPENDIX 8

Literature list

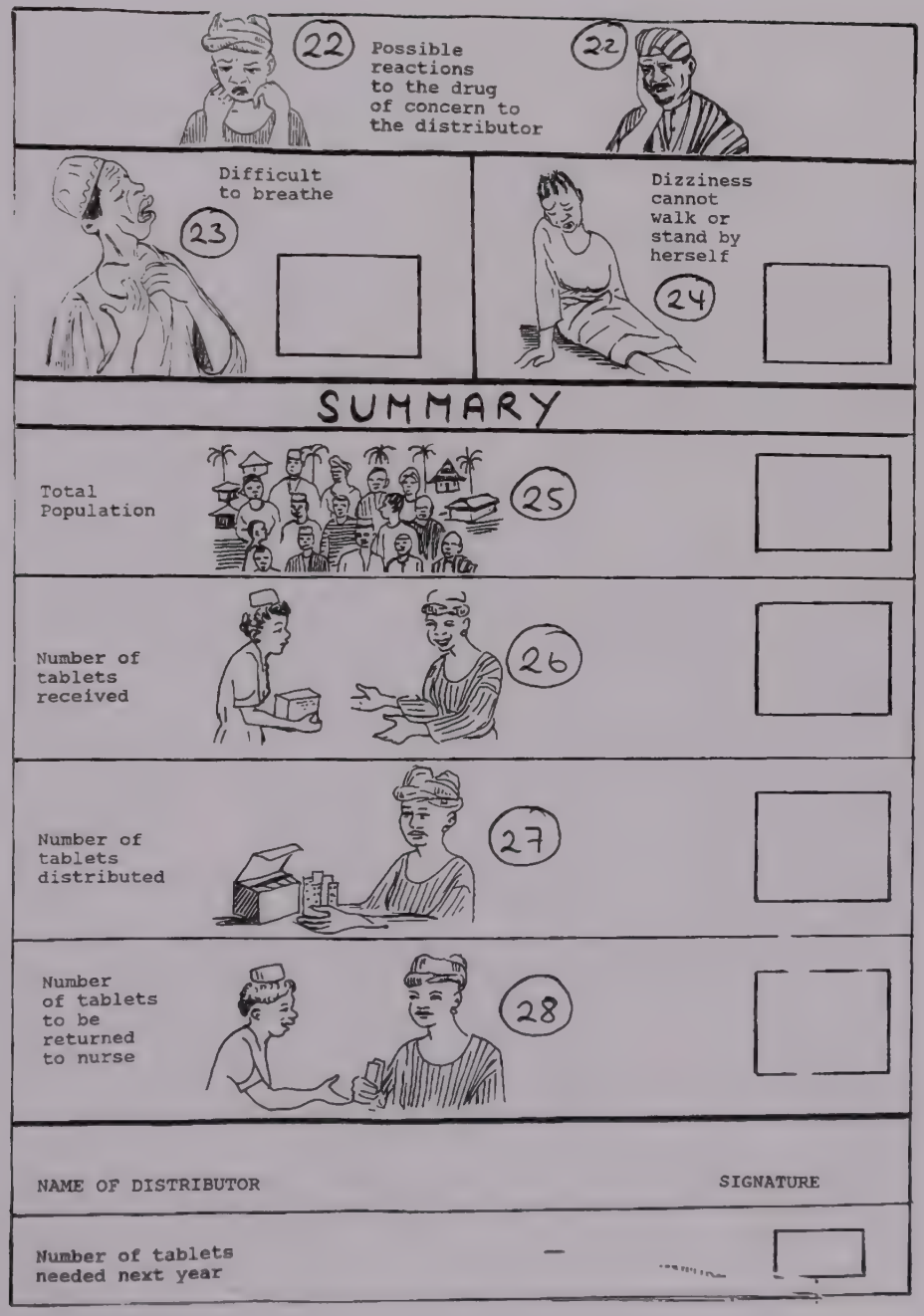
APPENDIX 1

The Revised (original Nigerian) pictorial form for distribution of Ivermectin, page 1




People not to be treated
6
May be treated later
7
Children under 5 years or under 90cm
8
NOT TO BE TREATED
9
Women pregnant during distribution
10
Return for treatment two weeks after birth
11
Sick People
12
Return for treatment when getting better
13
People on travel, absent
14
Return for treatment
15
Refusals
16
Acceptance
17
Total people not to be treated May be treated later
18
Total tablets to be reserved
19
Total people treated later
20
Total tablets distributed to people coming back for treatment
21

The Revised form, page 4



APPENDIX 2: The original written form for distribution of ivermectin

TREATMENT REPORTING FORM

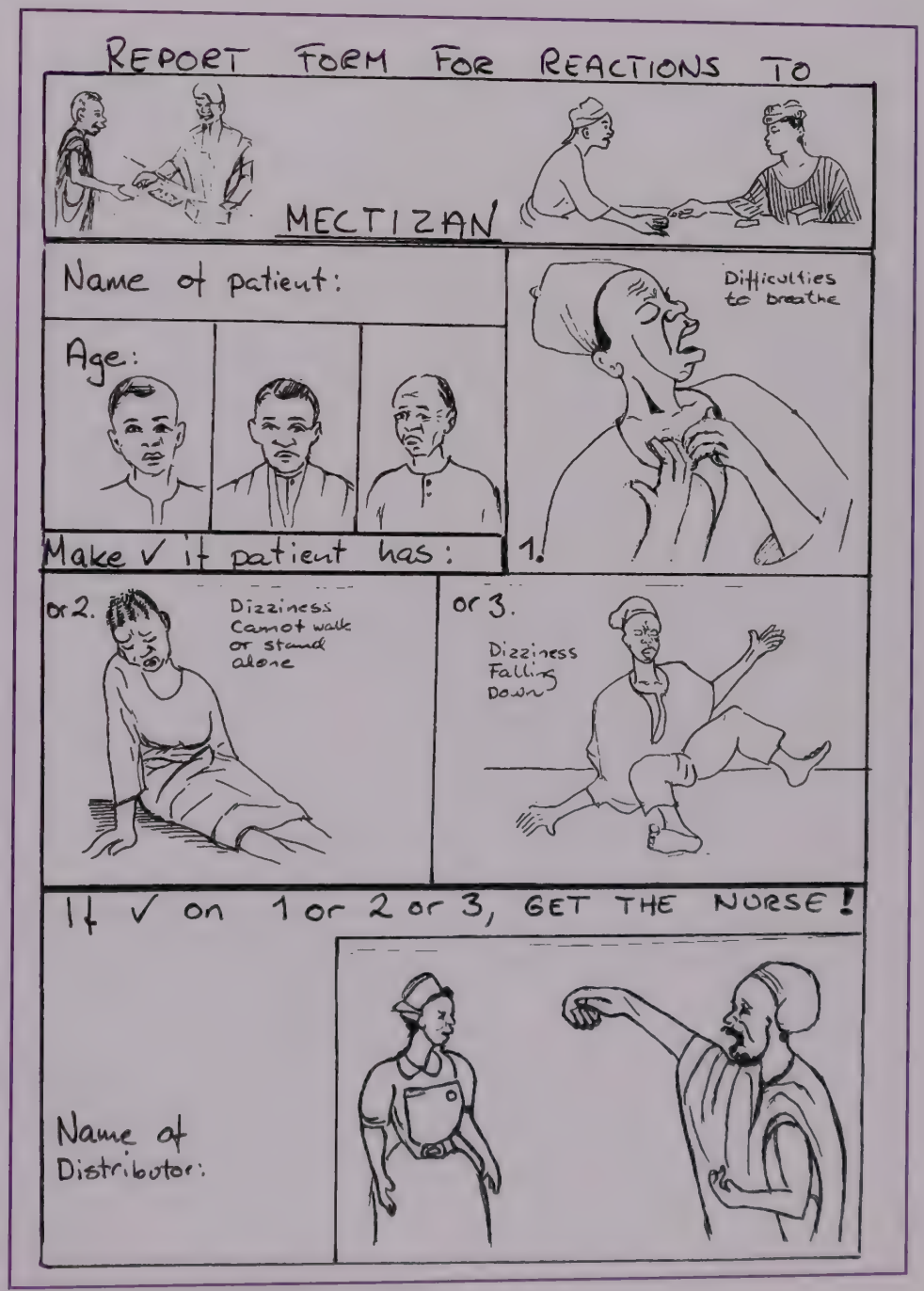
Village: _____
Date of treatment: ____ / ____ / _____ **Reporting date:**_____
Name of distributor:_____**Signature:**_____

Total population (after household enumeration)	
Number of people treated	
Number of people not treated	
* children < 5 years	
* < 15 kg	
* pregnant women	
* refusals	
* defaulters (absent....)	
Severe adverse reactions	
* dizziness (cannot walk/stand alone)	
* difficulty to breathe	
Number of tablets received (a)	
Number of tablets distributed (b)	
Number of tablets left for absentees/pregnant (c)	
Number of tablets not accounted for (lost) (d)	
Returned tablets {a - (b + c + d)}	
Number of tablets required for the next distribution cycle	

OPERATIONAL DEFINITION **COVERAGE RATE** **NUMBER OF PEOPLE TREATED/TOTAL POPULATION**

APPENDIX 3

Draft form for reporting side-effects of ivermectin



Note: "Mectizan" is a brand name for ivermectin, and was used during the early stages of the study.

APPENDIX 4

Structure of the testing of the "Oncho form"

The testing of the reporting form was done in three stages:

A. After explaining the study, the disease and how to distribute the drug to the community distributors (selected by the community).

At this stage, the literal interpretation of the form was assessed.

B. After explaining the pictures and the symbols (the intended message) on the reporting form to the selected community members (through translation and writing the text in the local language on the form.)

At this stage, the interpretation of the intended message/the abstract interpretation was assessed.

C. After the community distributors have been trained to use the form, and have actually used it on their own during distribution of ivermectin.

At this stage, the practical use of the form was assessed.

Being drunk was an exclusion criteria.

APPENDIX 5

Sample Analysis Form: "Constructed" answers

The final version should be in horizontal format, to avoid writing respondents' characteristics twice, and provide space for the "Analysis".

THE "ONCHO FORM": TESTING LEVEL I AND II

Picture number: 1

Picture description:

1. Correct Literal Interpretation: Man (distributor) handing tablets to a man (or boy)

2. Correct interpretation of message: Symbol showing People treated with medicine.

TEST NUMBER 1 (literal interpretation)

Respondents

M/F	Age	L/IL	Literal interpretation/verbatim response	Analysis
M	35	IL	Young man receiving something. (P) Some medicine. (P) From a pharmacist.	
F	20	IL	Man receiving medicine from another man.	
F	40	IL	Man selling groceries (P) Cannot see what kind of groceries.	
M	50	L	Young man receives medicine.	

(P) indicates "Probe"

TEST NUMBER 2 (interpretation of message)

Respondents

M/F	Age	L/IL	Literal interpretation/verbatim response	Analysis
M	35	IL	What does it mean? It means a man is receiving medicine, nothing else.	
F	20	IL	It is a man receiving medicine It has no other meaning.	
F	40	IL	The young man is receiving his groceries.	
M	50	L	The man thinks it is a good idea to give medicine to the young man	

ACTION TO BE TAKEN:

A: Modifications of picture: None

B: Explanation of message: Symbol should be explained carefully to community distributors.

People Treated

APPENDIX 6

Sample Reporting Level III: Operational Use of the Oncho Form

REPORTING ON THE PRACTICE IN THE THIRD STAGE

1. *During the training or trial run,* what were the points community distributors had problems with (**Asking - Doing - Giving Info**, points 1-9)?

2. *After the distribution,* what were the comments of the distributors regarding:

a) Comprehension of pictures and ideas

b) The practical use of the form

3. Comments/analysis by the researcher:

a) Problems due to the design of the form:

b) Problems due to the training methodology and/or training contents:

c) Problems due to social structure, community conflict, status/gender of the distributor, etc.

d) Other problems:

APPENDIX 7

THE "ONCHO FORM": Samples of "correct" interpretations of the pictures.

Note: Please make your own forms for reporting on the pretesting, using the interpretations provided here as guidelines.

Picture no: 1

Literal interpretation: Man handing tablets to a (young) man.

Interpretation of idea/message: Symbol showing People treated with medicine.

Picture no: 2

Literal interpretation: Woman handing tablets to a woman.

Interpretation of idea/message: Symbol showing People treated with medicine.

Picture no: 3

Literal interpretation: Measuring stick, used to measure height of community members to determine how many tablets of ivermectin they should receive. The correct tablet dosage is shown next to the marks on the stick. The boxes are for marking the number of people who have been given tablets.

Interpretation of idea/message: Symbol/tool showing a measuring tool for deciding a person's height, and decide how many tablets he/she should be given, and then mark in the boxes that tablets have been given.

Picture no: 4

Literal interpretation: A group of people. Tablets surrounding them, linked/connected by something.

Interpretation of idea/message: Number of people who have received tablets.

Picture no: 5

Literal interpretation: A row of tablets next to a square or box.

Interpretation of idea/message: Number of tablets given.

Picture no: 6

Literal interpretation: Male and female distributor (or man and woman) holding up a hand saying "no" or "stop".

Interpretation of idea/message: Symbol indicating "People not to be treated".

Picture no. 7

Literal interpretation: Male and female distributor (or man and woman) holding up a hand indicating "come here" or "come back", holding tablets in the other hand.

Interpretation of idea/message: Symbol indicating People who may be treated later (or come back for tablets).

Picture no: 8

Literal interpretation: A small girl, not reaching the mark on the height measuring stick where she qualifies for treatment, asking a female distributor (or a woman) for tablets.

The distributor says "no".

Interpretation of idea/message: Children under 90 cm or under five years should not be treated.

Picture no: 10

Literal interpretation: Pregnant woman asking female distributor for tablet. Distributor says "no".

Interpretation of idea/message: Pregnant women should not be treated with ivermectin.

Picture no: 11

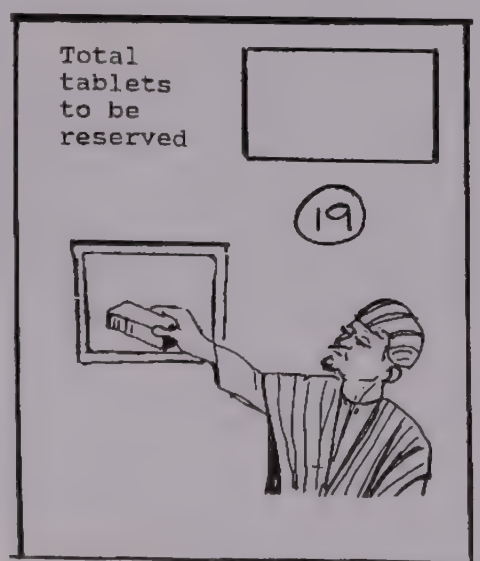
Literal interpretation: Woman with small baby on her back is given tablets by the female distributor.

Interpretation of idea/message: The pregnant woman from picture 10 has now delivered, and returns for treatment two weeks after birth.

Picture no: 19

Literal interpretation: Man putting box in a cupboard.

Interpretation of idea/message: Distributor saving tablets for people to be treated later, indicating number of tablets to be reserved.



Picture no: 22

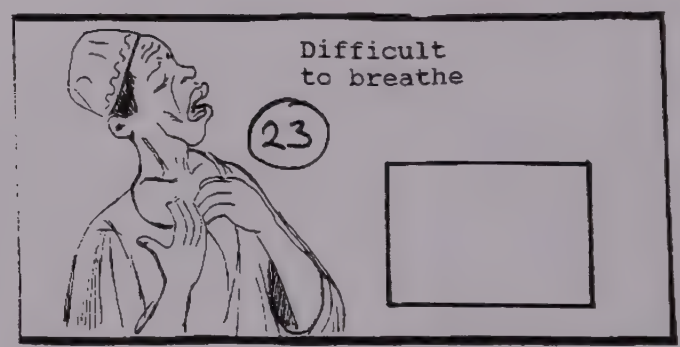
Literal interpretation: Man and woman (distributors) looking worried.

Interpretation of idea/message: Symbol showing distributors being concerned about possible side-effects the drug.

Picture no: 23

Literal interpretation: Man holding his hands to his chest, his mouth open, looking troubled.

Interpretation of idea/message: Man having difficulties to breathe, after having been treated with ivermectin.



Picture no: 26

Literal interpretation: Nurse handing a box to a woman/ female distributor.

Interpretation of idea/message: Symbol showing number of tablets received by the distributor(s).

APPENDIX 8

LITERATURE LIST

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To: Readers of the concept paper "Reporting with Pictures"

Request for feedback

Dear Reader,

The idea described in this paper is a new one, and potentially, we believe, a very useful one in operational research and interventions. We would very much appreciate hearing from you what your experiences are using the guidelines and suggestions proposed in the manual, whether as a health planner or as a researcher.

From the planners, we would like to hear:

- Is the concept useable? How have you used it, and what have been your experiences?

From the researchers, we would like to hear:

- What kind of research have you done, and what were the results?
- How easy/difficult was it to use the concept paper? Were there sections that were unclear? Any topic which was not explained well? Any topic missing?

For both groups, we would welcome your comments/suggestions for improvements of the paper, as it may be revised and republished, based on the feedback from the users in the field.

Please send your comments to:
The Manager, Onchocerciasis Operational Research Task Force,
WHO/TDR, 1211 Geneva 27, Switzerland.

Thank you very much.

Ane Haaland

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in Tropical Diseases

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